





# Letters to the editor

## Weaknesses in student projections

Sir, - Professor Gareth Williams is correct in pointing out that the Robbins report did not cause the escalation in higher education in the 1960s and in drawing attention to the weaknesses in its projections of future student demand and in those of the official projections which have followed (THE, November 18).

The basic factors (largely neglected in official projections) which have powered the continuously accelerating demand for higher education during the past century have been as follows:

1. The continuous exponential expansion of the proportions in the population of the professional and managerial classes who have always accounted for the major part of the demand for higher education. For the first part of this century, up to the 1950s this expansion occurred at a remarkably uniform exponential rate ranging from an average of 2.6 per cent in the UK (with probably a slightly higher rate in Europe) to over 4 per cent per annum in the USA. This coincides very closely with the average annual rate of expansion of higher education in the countries concerned. It may be noted that the accumulated effect of this exponential expansion which is mediated by net upward social migration to these classes and which served the overall needs of the econo-

mies concerned, is far in excess of any, mainly biologically caused effect of demographic increase in total population or total age group of university entrance age. It is this fact which renders previous projections, based on demographic data and somewhat arbitrary guesses of trends in overall participation rates, largely irrelevant.

2. The escalation of demand from about 1955 to about 1970 was mainly occasioned by the superimposition on this secular class expansion of a rapid escalation in the age participation rate (APR) of children from the same classes. In the case of the pace-making children of senior professionals the APR accelerated from a level of about 25-30 per cent which it had held for at least several decades before 1955 to about 80 per cent by 1970. The same escalation in the APR took place throughout Europe among the corresponding social classes. Even in the USA where it was superimposed on a pre-existing demand (and higher educational numerical level) already several times greater in proportion to population, than Europe, the main cause of escalation was almost certainly the same. The socio-cultural mechanism by which the professional/managerial classes in virtually all advanced countries came to a virtually

simultaneous conclusion that higher education which had previously been merely one of several ways of preserving socio-economic status for their children, had now become essential, remains to be researched. But that they were right in the coming period when the production and sale of knowledge itself rather than merely commodities, moves to the leading edge of economic development in the richer countries.

3. The falling off in the escalation in demand after 1970, throughout the advanced countries (with the possible exception of Japan) was mainly due to the fact that the APR for the leading professional classes had reached saturation value (75-90 per cent). In the case of Britain this effect was supplemented from the early 1970s by the virtual destruction of the teacher training certificate programme by deliberate Government action. This probably had the effect of cutting off, irreplaceably, a source of previous recruitment to higher education with a much higher proportion of working class entrants (based on O level entry and a socio-culturally credible career).

4. The expansion of the demand for graduate level education has continued to expand even in Britain right up to the present moment eg at a level of 4 per cent per annum from 1975-82. It may be deduced that the main source is once again the expansion of the professional and managerial classes as a proportion of the population, probably at a significantly higher rate than the secular rate in the century up to 1955, supplemented by a significant continued expansion in the average APR from these classes as those from the less 'academic' professions and managerial classes slowly catch up with the pace setting senior professionals.

5. The working class contribution, though coming from about two thirds of the total age group has remained a minor factor in the expansion in demand and, in fact, has remained virtually constant since 1970. I have suggested that this has little to do with the presence or absence of 'reserves of ability' but arises from the fact that in the majority of children from these classes there is little perception of the feasibility or significance of higher education until far too late to undertake that systematic discipline in intellectual conformity necessary for entrance - which comes so naturally in the socio-cultural environment of professional classes.

Yours faithfully,  
Professor E. G. EDWARDS  
University of Bradford.

## Danger of a narrow focus

Sir, - Your report of the findings of the Singer Committee (THE, November 25) indicates their substance, but after all the external criticism, is it wise for the Royal College of Art to indulge in public self-mortaration? We do not see a major postgraduate college in London where the practice and theory of art and design is studied at high level, and some of this needs to be directed indirectly related to the market place but it would be shortsighted and counter productive if the RCA, as a result of criticism is turned into an institution with a very narrow focus.

It is a very small college and it might therefore be tempting to attempt to focus simply for economic reasons. But too small even to mount its existing courses with a reasonable unit cost, and yet there needs to be a substantial investment in new technology and in my opinion development of postgraduate research. Changing the staff every few years will not alter this and will ensure that there is no continuity of research or management.

The passing comment on All Souls' interesting. Is that really the position of the RCA? Is it even a desirable objective? How would the Fellows of All Souls respond to short mandatory courses on business strategy and marketing?

If the RCA wishes to ensure that its students make a greater contribution to national competitiveness, they will have to devise methods of student selection that relate to this criteria and to provide courses that will attract them. In the faculty of art and design at Brighton Polytechnic the most commercially competitive (and often the most talented), seldom apply to the RCA. They want to earn money and are equipped to do so.

But as factors, (brought in from other disciplines, often inexperienced in management as well as art and design) come and go, someone should look at how the RCA makes its own management and policy decisions before introducing too many short courses, mandatory or otherwise in the subject.

Yours sincerely,  
ROBIN PLUMMER  
3 Ailingworth Street,  
Brighton.

## Nuffield fends off grants

by Jon Turney  
Science Correspondent

The Nuffield Foundation is trying to fend off grant applications from academics suffering under the squeeze on research council funds, to protect its role as a flexible backer of innovative projects.

The foundation's 1982 annual report, published this week, says the trustees wish to emphasize that they will only consider applications which are eligible for support by the research council under exceptional circumstances. Mr James Cornford, the foundation's director, explained that as the pressure on research councils had increased over the last few years Nuffield had received more and more

applications which had been graded well by the councils but not funded. The foundation's report says the success rate for applications in science has fallen from roughly one in two in 1976 to one in four in 1982. And it stresses that a foundation with wide interests and small resources cannot fill the gaps in research research council funding.

Mr Cornford said that while the foundation's objectives covered the fields of several research councils, they were interested in backing work which was not on the councils' normal agenda. At the moment, they made around 30 grants a year of £30-£40,000 each, to university research groups. On that scale, "there's no point in having private foundations which don't do

their own thing," he said.

The foundation's current work also gives an indication of the pressure on the university side of the dual-support system for research funding. A scheme announced earlier in the autumn to offer launching grants to newly appointed lecturers in science has already received 300 applications, roughly the same as the total of "new blood" university lectureships in 1983.

The scheme will offer two-year grants of up to £4,000 each to help start research projects which have not taken firm enough shape to convince a research council to part with money. "We hope the scheme will beam in on the most promising new people," Mr Cornford said.



Medical students from all over Britain converged on the House of Commons to lobby for increased grants for medical and mature students. Members of the National Union of Students took their case to the Labour spokesman on education, Giles Radice (centre), led by the NUS president, Neil Stewart (to his right).

## Dole study rules hinder rather than help

by Patricia Santinelli

The Government should scrap the three-month wait for jobless young people wanting to study for up to 21 hours a week, Youthaid says in a report to be published next week.

The national charity also wants the Government to encourage colleges to provide courses to meet the needs and wishes of young unemployed people and make money available for them to do so.

It should also end the confusion about definitions and state clearly how young people can qualify under the rules, Youthaid says.

In the report *Studying on the Dole* funded by the Department of Education and Science, Youthaid says that unemployed young people are prevented from studying while on the dole by rules that were introduced to help them.

The report examined 250 colleges and schools and is being sent to the Secretary of State for Education. It says that the rules are so complicated that they confuse the colleges, college staff and Government officials alike. Hardly anyone takes advantage of them.

Under current rules, people on the dole who want to study must remain available for work and are not allowed to study for more than 21 hours in any week. If they do, they lose their unemployment or supplementary benefit. In the first three months out of work they can only study up to 15

hours a week, including homework.

The survey was conducted by John Peacock, the author of the report. It found that many colleges did not offer 21-hour study and those that did provided only for a few students.

His findings show that among colleges believed to offer places to unemployed students only two out of three did so and at those there were typically around 15-20 students.

Among colleges with unemployed students, nearly three out of four (73 per cent) put them into normal courses. There were few courses especially developed to meet the needs and wishes of the young unemployed and money was not available to develop them.

In addition two thirds of colleges offering places had found problems with the Department of Health and Social Security over the exact meaning of "21 hours". Some students on courses of less than that period had their dole cut and there was widespread confusion and conflict in the interpretation of the regulations.

But the report does point out that for those students and colleges who did find a way through the maze, the benefits were enormous. It had made a tremendous difference to their lives and had lifted their depression and restored their confidence.

Youthaid makes two other recommendations. Schools should provide part-time education for unemployed young people and advertise the possibilities clearly and widely.

## Anti-racist demands rejected

Polytechnic teacher trainers have rejected a call by a Commission for Racial Equality group that they should run specifically anti-racist courses.

Instead the Polytechnic Council for Education of Teachers has told the CRE that any racist tendencies can be best countered by building on the considerable developments already made.

"It is by the extension and improvement of existing courses in multicultural education in teacher training that racial prejudice can best be overcome in schools rather than the devising and teaching of specifically anti-racist courses," PCET says.

PCET's reaction follows a letter this summer from the commission's new anti-racist group which was sent to all teacher training institutions. This asked them to investigate the racial attitudes of their staff and devise anti-racist courses. It added that it was concerned about the failure of institutions to include multicultural and anti-racist material in their courses.

"In Britain today we live in a profoundly racist society and therefore cannot take a neutral stance towards this in our teacher training institutions. It is time for those concerned about racism to consider strategies both for practitioners to operate and for establishing this as a priority and mandatory part of teacher education," the letter said.

In its reply the council says that although it is committed to education for a multicultural society, it does not accept that "In Britain today we live in a profoundly racist society".

"Inevitably there are areas geographically and socially where such prejudices are apparent but this does not justify such a sweeping generalization, nor the explicit teaching of anti-racism which is advocated."

The council adds that it accepts entirely the necessity for all teachers to be sympathetic to the educational needs of pupils from the several ethnic backgrounds. It points out that it is a recognition of this which has led most teacher training institutions to incorporate considerations of the implications for classroom teaching.

"This may be achieved by the inclusion of specific course units or by a multicultural dimension being added to existing areas of study. It is significant that valuing bodies, especially the Council for National Academic Awards now expect to see a commitment to this course dimension at the time of validation," PCET says.

Leader, back page

## St Andrews subject choice restricted, claim students

by Olga Wojtas  
Scottish Correspondent

St Andrews University students say they fear home students' subject choice will be restricted because of pressure from overseas student numbers.

The Students Representative Council told a University Grants Committee visitation that quotas had been imposed on first year arts subjects, with priority given to home students studying honours in a particular subject, and to overseas students, many of whom are non-graduating.

Mr Rob Borthwick, SRC president, said this was the first year of the quota system, and it had been applied very laxly. "No home students have had their choice restricted, but this is unlikely to be the case in future years since the university has adopted an aggressive marketing campaign to attract overseas students, particularly from North America," he said.

But the university secretary, Dr Martin Lowe, said students' fears were unfounded. Overseas students did not come under the quota system. "They're not creating the problem, it's the cuts," he said.

The senate had decided that priority should be given to honours students in their graduating subjects, but this year all first year students had been placed in the subjects of their choice. Some in second or third years may have been encouraged to change side.

Mr Borthwick said the SRC was urging the university to create temporary five year lectureships in hard-pressed departments such as English and Scottish history.

Dr Lowe said this possibility was under consideration but stressed that income from overseas students' fees had already been used to hire extra tutorial assistants. "This income is enabling us to ameliorate the effect of the cuts. Without it we would have had to shed more posts," he said.

## Pressure put on English

A pressure group favouring reform of the English syllabus at Oxford University is to circulate all 800 students of English with details of how they can try to change their tutors on grounds of personal or analytical incompatibility.

Oxford English Limited is named because of the apparent limits of the university's English syllabus. It plans to send round the details as part of its general campaign to allow students more opportunities to avoid "bad teaching" and work with dons who teach "critical theory" approaches to literature.

The move follows a highly-charged public meeting last week attended by some 300 students on the question "English at Oxford is in need of fairly basic reform".

The debate over English at Oxford has been bubbling since 1980.

It was given fresh impetus by an OEL survey in the summer which showed that 44 per cent of the 261 students who replied thought essay reading a waste of time, 60 per cent felt isolated by the tutorial system and 58 per cent said they would change their tutors if they could.

The Oxford faculty also set up a committee to look into English examinations after finding a sudden and dramatic fall in the proportion of students gaining first class degrees in 1982 from a 15 per cent norm to 10.9 per cent.

The committee has now recommended all examination marks should be computerized with first class awards given to the top 15 per cent, ending the so-called "tyranny of the agreed alpha". Remarkably will also replace vices for borderline cases.

## Adults must pay more, says Brooke

A radical rethink about the method of funding adult courses should take place, Mr Peter Brooke, under-secretary of state for education, said in his first keynote speech since taking office.

He told the National Institute of Adult Continuing Education's local authority conference that this was necessary because of the difficult financial situation.

Local education authorities were responsible for the "lion's share" of the service with two million enrolments a year and students should pay more, provided that special arrangements were made to protect special groups, he said.

He also said the Government had set aside an additional £50,000 a year to support a development unit to carry out an agreed programme of work to replace the Advisory Council for Adult and Continuing Education.

This will depend on talks still to be held with the local authority associations over the establishment of a national development council. But Mr Peter Brooke, told the conference that he did not hold out much hope.

The ability of the authorities to use the £2m which had been added to the rate support grant settlement for unemployed adults would depend on containing costs, including lower pay agreements, he said.

He also said the Government had set aside an additional £50,000 a year to support a development unit to carry out an agreed programme of work to replace the Advisory Council for Adult and Continuing Education.

This will depend on talks still to be held with the local authority associations over the establishment of a national development council. But Mr Peter Brooke, told the conference that he did not hold out much hope.

## APT recognition

Sir, - In his otherwise excellent report (THE, November 18) on the success of the Association of Polytechnic Teachers at Teesside Polytechnic in obtaining a favourable decision from an industrial tribunal on the matter of recognition, David Jobbins introduces two important errors.

The first is in the suggestion that the APT believes the decision "will help it secure local recognition from other education authorities". The decision actually means that APT is recognized by other local authorities and the only question now is the time necessary to implement that recognition.

The second is much more important. The article states the APT "has never been admitted to the teachers' panel which conducts salary negotiations with employers". For their own reasons, certain people have published documents to the press and to others stating that APT is not a member of the teachers' panel of the Further Education Burnham Committee. Since this statement can be easily checked and found to be false by reference to the statutory documents published by the Further Education Burnham Committee it is not clear why anyone gives it the least credence.

It is true that the National Association of Teachers in Further and Higher Education has seen fit to refuse to have meetings of the teachers' panel and have thus broken the principle that there should be a single voice on behalf of the teachers' panel in the committee. Indeed, on one occasion when the offer on the table was a pay rise of a mere 2 1/2 per cent, APT was left as the only representative of the teachers' panel present to reject that offer.

It must be difficult for lecturers in further and higher education to understand what advantages there can possibly be to them from the prevention of meetings of the Further Education Burnham Teachers' panel. Certainly the management panel shows no signs of being more sympathetic to the needs of the university. It is "voted down by the block votes of Nuffield" is not clear at all what purpose is served by the repetition in THE of the claim that all this occurs because APT is not a member of the teachers' panel.

Yours faithfully,  
Dr A. J. POINSON,  
APT Representative,  
FE Burnham Committee.

## Oxford image

Sir, - A neat, self reflection of the image of Oxford: I spoke (THE, November 4) of "difficulties and frustrations" in the existing admissions procedure at Oxford, and Professor Blackstone (November 18) assumed I was referring to inconvenient erosion of the leisure-time of dons. I was actually referring to the difficulty - occasioned by the structure of the procedure, not by conflicts of interest and predilection - of taking just decisions about individual applicants.

If, as I hope, the reformed procedure (which will take more time, not less) makes a real contribution to the solution of that difficulty, I think it will be found that it has made

incidentally an equally large contribution to the resolution of the wide social and educational issue which Professor Blackstone has in mind. The converse would not have held if my committee had approached its task from the other direction, since the only absolute guarantee of change in the composition of the Oxford intake would have been the imposition of quotas: that is to say, a procedure which would treat the category of school to which an applicant had been sent as the primary consideration and the ability of the applicant as secondary.

Yours faithfully,  
SIR KENNETH DOVER  
President,  
Corpus Christi College,  
Oxford.



Oxford admissions: reforms on the way

## Fair trading

Sir, - One of the less engaging features of the trade press is the way it inevitably reflects and endorses the prejudices and judgments of the dominant interests in the trade for which it caters. When, however, you state in your editorial "Never mind the width of the editorial" (THE, November 18) that "it is widely believed that the UGC in 1981 discriminated against the technological universities... (this)... is almost certainly false", you risk offending even the most tolerant and understanding of your readers.

English universities can be divided into three sets on the basis of the composition of their student body viz. "technological", "large general" and "arts". In the first category all except one (two if you admit Loughborough University, a borderline case) received a greater than average cut in grant; no institution in the second category received a greater than average cut while institutions in the third received a cut (five) were equal to those receiving a less than average cut. This is discrimination.

In the technological universities we are careful to distinguish between what people say and what they do - good journalists, and there are such even among those who work for the trade press - usually appreciate this vital distinction.

Professor J. M. ASHWORTH  
Salford University.

## Cross words

Sir, - I believe that Christianity is fundamentally mistaken and dangerous. Would Dr Savage of Southampton University support me if I proposed to banish from my classes students' wedding practices and other religious rituals? If not, how would he differentiate between the case and the case of his ban on CND badges?

ANDREW BILSEY  
University College, Cardiff.

## YOP report

Sir, - Your issue of November 11 included a summary of my research report *The Youth Opportunities Programme in Contrasting Local Areas* by your reporter Patricia Santinelli. This contained several distortions of the contents of the report.

- The effect of participation in YOP for girls is not clearcut. In two areas of high unemployment they did less well than boys, but not in the third (Birmingham). In 1981 there, in spite of higher initial unemployment they did better after YOP than boys. In two areas of medium unemployment (Bradford and Somerset) YOP participants referred to in the text also show an overall improvement for girls over boys in the later years of YOP.
- There was some evidence that West Indians were helped to overcome disadvantage by YOP in the early stages of the recession but that this effect disappeared as unemployment rose. The national surveys also show this.
- The poorly qualified in Birmingham in 1979 did not have the same overall success rate as the better qualified after YOP - the effect was noted only for the boys.

I would be grateful if you could publish these corrections since my report was a summary of other researchers' work.

Yours faithfully,  
K. M. GREAVES (Mrs)  
Senior Research Officer,  
Department of Employment.

## Typing speed

Sir, - Judy Rolzen and Mark Jepson's letter of November 18 contains many statements surprising to those who know about the conduct of their project. I am most directly concerned however with their statement that "the department of government, Brunel University spent three months typing (the report)".

In working with Mrs Rolzen, I have learned to keep a detailed diary. During the period February 20 to April 29 1983, the report appeared in drafts and drafts for typing and retyping. I did not receive the final version of the last chapter until April 29. It had been typed privately in a different typewriter from the rest of the report and had to be retyped. It finally arrived with two pages missing. All parts of the report were typed in the week that they were received other than those submitted, for the Easter holidays.

Yours faithfully,  
MRS SALLY HARRIS  
Department Secretary,  
Department of Government,  
Brunel University,  
London.

## UGC democracy

Sir, - The Labour Party really can't have it both ways.

When the last round of university elections was announced in 1981, Labour spokesmen complained loudly and bitterly about the lack of accountability of the University Grants Committee. How dare such a body, they asked, make major decisions about the future of the universities and those decisions not be open to challenge by MPs through their questioning of ministers?

Now that the Government has done something about this by giving the UGC "more direction", Labour's spokesman complains of the "almost unconstitutional" actions of the UGC in carrying out the Government's wishes (THE, November 18).

Those of us who genuinely welcome the greater openness and accountability of the UGC are going to have to accept that it will not always lead to the educational and financial solutions we may want to see. But that is what democracy is all about.

Yours faithfully,  
M. C. CLARKE  
20 Alameda Road,  
London, SW12.

## Kant view

Sir, - In an otherwise valuable review of my book *Kant's Political Philosophy* (THE, November 18) Hans Reiss misleadingly suggests that Kant believes that lasting peace can be achieved "through a federation of parliamentary democracies". This is not Kant's view. Kant believes we can best approach world peace through a gradually enlarging federation of states with republican constitutions.

This is not a minor point. Reiss's account may be taken to imply that Britain, for instance, as a parliamentary democracy already possesses the ideal internal form of political institutions as envisaged by Kant and now simply has to wait for the rest of the non-parliamentary democracies to get the same way. However, as I make clear in my book, representative democracy within a state is not enough for Kant. He also requires the firm and explicit separation of powers between the executive and the legislature for his republican ideal to be achieved. Kant rallied in his day against the only apparent separation of powers existing under the British Constitution. Now, days things are not much improved in this respect. Kant would have viewed with great suspicion the power of the Cabinet both to make and execute laws. This would have to be changed if Britain were to play its full part in a "Kantian" drive for lasting peace.

As the new American Constitution, as I explain in my book, that Kant's eyes when outlining his ideal of a republican state. Providing it was not subverted, this constitution, in Kant's view, gave the best possible guarantee of peace.

Yours faithfully,  
HOWARD WILLIAMS  
University College of Wales,  
Aberystwyth.

## Drop-out rate falls

continued from front page

current drop-out rate of 3 per cent, an improvement of 2 per cent on previous years and figures are roughly the same at the University of Nottingham. Officials at the Universities of Birmingham, Sheffield, Lancaster and Leicester said up-to-date figures were not available but there had been some slight changes.

More evidence of improvement came from the University of Bristol, which the annual wastage rate had remained around three per cent mark throughout the late 1970s. This year it fell very slightly.

Most drop-outs leave during, or at the end of their first year.

The wastage rates calculated by universities include those who fail exams as well as those who withdraw for personal reasons, medical reasons or because of bad conduct.

Because of this, some institutions say it is too early to tell whether this year's figures are so indication of important change - or merely a hiccup. Universities of Leeds, Sheffield and East Anglia were among those who had noticed "no significant change".

A big change was at the University of Reading, where the rate of withdrawal, 2.8 per cent in the late 1970s, fell to only 1.3 per cent this year. (An official said: "We do not know why. Suggestions have been made that high unemployment makes students reluctant to give up their courses.")

The University Grants Committee was writing to Vice-Chancellors this week to tell them whether their bids for more students in the next two years were acceptable. Some universities have suggested taking fewer than they



"GOOD NEWS, GENTLEMEN! WE WON'T BE CLOSING DOWN THE ENGLISH FACULTY AFTER ALL!"

## Scots may extend exams system

The Scottish Examination Board has proposed new sixth year "extension studies" courses to be recognized as entry qualifications to higher education.

At present, Scottish pupils sit Higher or grade exams, used for entrance to university, at the end of their fifth year. Although they can go on to sit the Certificate of Sixth Year Studies, this has never been accepted by colleges and universities as an entrance qualification.

The board has now suggested replacing the CSYS with extension studies.

The board stresses that Higher will remain the base for higher education courses, with pupils still able to enter colleges and universities after fifth year.

Letters for publication should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.



## DON'S DIARY

## THURSDAY

Fly by SAS from London Heathrow to Stockholm Arlanda. Uneventful flight. I have been invited as visiting professor to teach organizational behaviour/management development methods on a summer course run by the Stockholm School of Economics. This is being held at the Swedish Institute of Management's residential training centre at Sigtuna by Lake Mälaren and I take a taxi there from the airport. The woman taxi driver and I discuss, in English, the virtues of child car safety seats and Volvo electric windows.

On arrival in the centre I have time only to unpack and change before another taxi arrives to take me to dine at the home of a French faculty member. Must remember that "faculty" means staff out here.

## FRIDAY

My sessions begin on Monday so I can enjoy the "visiting" aspect of my job. I sit in on a seminar run by a Dutch professor and mingle with the 40 course participants, all of whom are lecturers in management subjects. Some 18 different nationalities are represented.

The programme director introduces me as next week's "star attraction" and I am eyed suspiciously by everyone. I continue my role of observer in the evening, when the north American faculty attempt to teach the fundamentals of American football. A "touch" version is played so as to minimize casualties.

## SATURDAY

Four of us go by car to visit Uppsala, which lies about 50 kilometres north of where we are staying. It seems deserted.

After briefly looking at the shops and taking coffee at a pavement cafe, we drive out to Old Uppsala, which contains the burial mounds of the ancient Swedish kings. Our quest for cultured satisfaction, we return to the centre in the late afternoon.

After dinner I get into conversation with one of three participants from the People's Republic of China. He speaks good, although heavily accented English. It appears that many of his countrymen and women are learning English with the BBC's *Follow Me* series.

We discuss the size of the Chinese population - always a good topic - and I have the latest birth control system explained to me. As I understand it, anyone now producing more than one child has his or her salary reduced by 10 per cent for 10 years and is denied promotion during that period. I retire to bed, mulling over the concept of social engineering on such a grand scale.

## SUNDAY

Nearly everyone has gone on a picnic. I elect to stay at the centre, checking my lecture notes, handouts, videos and tape-slide programmes.

The lecture room is most impressive and displays an abundance of wall sockets, white, black and magnetic boards, overhead and slide projectors and blackout curtains. I cheerfully anticipate working in such well-equipped surroundings.

After lunch I decide to take a walk around the lake and am joined by some African participants. They express interest in Glasgow University's part-time master's degree programmes in business administration and in engineering management.

They are also impressed by the concept of the West of Scotland Science Park in which the university is playing a major part. Early to bed, as my "professing" starts tomorrow.

## MONDAY

Twenty participants attend my seminar, while the other 20 are with a professor from New York University who is running a parallel session on the use of microcomputers in teaching. Apple Europluses are scattered along the corridor and inside the syndicate rooms. Teaching experienced managers is hard work, even harder.

We discuss certain key concepts and models in organizational behaviour and I demonstrate some of the methods which could be used to teach them. The Algerian and Lebanese members seem particularly interested and regularly buttonhole me during the breaks for more information.

The evening is taken up with a demonstration of a microcomputer package which can be used as a counselling aid. When this is finished, about nine o'clock, I decide to have my first sauna. One of the Swedish participants accompanies me and explains the procedure.

## TUESDAY

Having slightly modified yesterday's seminar in the light of experience, I repeat it with the remaining 20 participants. The session using video training materials borrowed from friends at London University's staff development centre proves particularly successful.

Overall I feel both relieved and surprised at the comparatively small number of difficulties encountered. I had expected more, given the mix of nationalities and cultures. The three Chinese participants are aged about 55, 45 and 31. It is rumoured that the two older ones are in the process of being "re-educated" and that the youngest is the most senior. His role appears to be that of an "academic minder" and his paragon is sought whenever the older Chinese wish to do something.

## WEDNESDAY

I have no teaching commitments today so join the participants on a coach which takes them to the School of Economics in the centre of Stockholm. They attend classes and use the library.

I decide against a frantic sight-seeing tour of the capital and choose instead to visit the shops so as to observe the Swedish people in their natural environment.

## THURSDAY

Excitement breaks out after breakfast when a Columbian participant demands to be flown back immediately to her country. It appears that she has become increasingly depressed and homesick during the previous three weeks of the course and has now reached breaking point. She finally leaves by taxi at midday.

By comparison, my seminar passes off without incident.

## FRIDAY

I finish teaching today. In the evening there is a barbecue organized by the Brazilian and Lebanese participants. The food is delicious.

The air of gaiety becomes overshadowed, however, by the latest news from the Lebanon. We learn from the Lebanese ambassador to Sweden attending in a private capacity that a number of people have been killed during the day and that Beirut airport was temporarily closed.

## SATURDAY

I fly back in London this afternoon, leaving the participants to another three weeks of intensive study. Having attended a similar course in 1974, I feel only sympathy for them. Now, however, my own commitments are filled. I can look forward to a brief period of rest and a happy reunion with my wife and family.

Andrzej Huczynski

The author is lecturer in organizational behaviour at the University of Glasgow.

## ILEA spells out its problems

by Paul Flather

The Inner London Education Authority has painted a picture of wholesale redundancies, skeleton building repairs, and an end of discretionary awards if it is forced to stick to Government targets on future education spending.

A consultation document sent to all bodies involved in London education sets out the options for future spending and reveals the dramatic reductions needed to meet Government desired cuts of £120m in one or two years from the £370m budget.

The document, issued by Councillor Steve Bundred, chairman of the ILEA finance subcommittee, says reductions of this order would mean ending education spending wherever legally possible, and then facing the risk of legal action over the quality of provision.

It includes two appendices on the effects of such cuts: if £120m was cut in one year it would mean just one in ten

vacancies in higher and further education being filled on an emergency basis; over two years 1,500 jobs would go, discretionary awards would be cut, together with all youth training schemes costing money and increased charges for all courses.

It also includes details of how a 5 per cent or £40m cut might affect ILEA provision, including £5.5m savings in higher and further education. The authority makes clear that some of these would have "a serious and clearly unacceptable effect on education".

The document has been put out to illustrate the difficulties facing ILEA. In fact it draws away from Government targets and sets out three feasible options for future spending ranging from savings of £15m with £5m for new developments, to making no savings with £20m put aside for new developments.

Making 5 per cent savings would mean restricting the ILEA toppling-up contribution to the advanced further

education allocation by £2m.

The authority already "tops up" national allocation by £13m, and estimates that after this year's National Advisory Board allocations it will need to spend £5m more. A fresh £1m shortfall would, it says, exacerbate management problems and affect student numbers.

Some 500 discretionary awards mostly for second qualifications would not go, one student hostel would close with charges up at other hostels, technical equipment budget would be cut by 15 per cent, non-advanced further education teaching would be kept to 27 timetable hours a week, and allowances for materials and furniture in colleges would fall by 7½ per cent.

Adult and youth service provision would also have to fall by almost 25% with increased fees, a fall of 28½% (4 per cent) and 460 part-time (6 per cent) lecturer posts, and the 50 careers staff cut by 24.

## Birmingham hopes for YTS pilot

by Patricia Santinelli

Birmingham is hoping to run a pilot scheme next year which will enable it to offer young people who cannot find immediate work the opportunity to complete a certificated course or get more experience in specific skills.

The local education authority is holding private talks with senior officers of the Manpower Services Commission over the setting up of a two year Youth Training Scheme.

It says that although the MSC does not have sufficient funds for a national two-year programme, it will consider pilot schemes in certain areas. Substantial MSC funding to Birmingham has already been discussed but the authority will not say how much.

Birmingham have five colleges of further education involved in the YTS with a total of 1,400 young people on Mode A schemes and another 1,100 trainees on Mode B1 schemes in adult education centres. This is out of a total of 8,500 filled places in the city.

Matthew Boulton college and Hantsworth technical college are already running mini two-year pilot schemes involving some 200 trainees, 90 of whom are on straightforward college-based courses, another 90 are expected to be located on two of the existing B1 schemes. A further 20 are being encouraged to develop their own business ideas.

The authority is also carrying out a study with the Confederation of British Industry to see what YTS managers think about long term training and future employment needs.

Trainees at Pitmans in Birmingham have issued a list of 12 demands which they want the private training agency to meet.

The demands which include an increased training allowance, qualified trainers and supervisors, increased work placements and a clearly defined and impartial grievance procedure, were put to Pitmans by trainee representatives last week.

YTS and the new 17-plus qualifications should be merged into a basic degree which would be ignored by employers, unions or the education service, the Further Education Unit told the House of Lords committee this week.

Giving evidence to the Lords Barrow Community Committee which is looking into the vocational training of young people in the EEC, the FEU said that in turn this base should be overseen by a unified curriculum body responsible for the overall design of all vocational programmes.

The FEU also proposed extending trainee/student status into a second year as a way of solving the problem of what to do with the one year Youth Training Scheme.



Jean St Clair, who recently appeared in the play *Children of a Lesser God*, about a deaf woman, was taking part in an Evening of Dance by Hearing and Hearing Impaired Dancers at the Place Theatre, London on Wednesday. The aim of the performance, by Nina Falaise and Dancers, was to get funding for a nationwide tour. This piece was called *Sound Poems*. Feature, page 10.

## DES plans to 'control' architecture training

The continuing growth of the architecture profession is out of balance with foreseeable job opportunities, a senior Department of Education official told the Royal Institute of British Architects' education conference.

Mr David Hancock, permanent secretary at the DES, added that the department intended to balance the education of architects against the need for engineers. He said there needed to be some sort of control system because of the higher education cuts. The conference held in London on Tuesday, was on the theme of lifelong learning and changing policies.

Mr Hancock said that this was not an attempt by the DES at a "manpower planning exercise" but the department could not ignore the fact that architecture was one of the most expensive trainings and there were too many architects compared to engineers. A DES survey available early next year on the employment record of all students would show that engineering and accountancy had the best job record.

The heads of the schools of architecture, staff and students strongly contested the need to reduce numbers. Professor David Gooling of Sheffield University said that most of his students gained work soon after graduation.

Lord Esher, chairman of the NAB/UOC architecture working group, said that a report prepared for the group showed room for "modest expansion" but architectural education would still need to be restricted.

## Scientists await data from Spacelab

Several teams of British scientists are waiting for data from experiments aboard Spacelab, launched by the American space shuttle on Monday.

The usual British involvement in this kind of mission will help give the country a foothold in a new era of space exploration, says a spokesman.

into the shuttle Columbia's cargo bay for this trip was built by the European Space Agency at a cost approaching £100m.

To successful launch marks Europe's determination to exploit the industrial and scientific, rather than military, uses of space. And this is the first time

scientists who are not career astronauts have flown in orbit.

The British experiments, together with over 60 others, will be managed by two scientists working in the pressurized laboratory. Dr Ulf Merbold, physicist from Stuttgart and Dr Byron L. DeWeese, from Massachusetts, have

## News in brief

## 'Don't sell our names' says NUS

The National Union of Students is objecting strongly to British Rail's plan to sell names and addresses of student railcard holders to commercial interests.

BR has already been criticized by consumer watchdogs for its plans to sell details of senior citizens' railcard holders to an insurance company. A BR official said that railcard applicants could object in advance to their names and addresses being sold for marketing purposes. About 800,000 student railcards have been issued.

## Crafty computer

South-East Arts and the Arts Council of Great Britain are to sponsor a one-year residency in computer art at the University of Kent, Canterbury, and are inviting applications. The successful artist will undertake an exhibition, workshops and possibly a tour.

## Seven tongues

The EEC has awarded £38,000 in grants to the University of Essex for development of a seven-language machine translation system. The project, called EUROTRA, involves the work of researchers from 11 European universities, all working to improve translations for technical subjects in EEC institutions.

## Close study

Sheffield City Polytechnic and the Anglian Regional Management Centre at North-East London Polytechnic have received a £127,000 grant from the Department of Education and Science to investigate the effect of the cuts in local authority higher education. The two-year study will be undertaken by John Gill of Sheffield City Polytechnic and John Pratt of the ARM.

## Potted history

The private papers of Josiah Clement Wedgwood, the first Baron of Wedgwood, a member of the famous pottery family and MP for Newcastle-under-Lyme from 1906 to 1942, have been presented to the University of Keele library by his granddaughter Dr N. J. Pease, of Cambridge. The collection includes diaries and letters detailing his unusual parliamentary career, his experiences during the Boer War and his correspondences with leading politicians of the day, including Winston Churchill.

## Self aware

A scheme to help Scottish graduates set up their own businesses is now entering its second year. The eight Scottish universities, five central institutions and two further education colleges have been holding one-day conferences to publicize the Graduate Enterprise Scheme, described by Sir Monty Finlayson as "one of the more exciting and novel exercises in recent times."

## New Bill

Education 2000, the charitable trust representing people in schools, universities, commerce and industry, is to seek implementation of a new Education Bill to make radical changes in the education system. The group's aims include a new pattern for children under 14 based on a partnership between home and school; a mixed programme of training, work and education for 14-18-year-olds; and adult retraining rights.

Education 2000, the charitable trust representing people in schools, universities, commerce and industry, is to seek implementation of a new Education Bill to make radical changes in the education system. The group's aims include a new pattern for children under 14 based on a partnership between home and school; a mixed programme of training, work and education for 14-18-year-olds; and adult retraining rights.

Education 2000, the charitable trust representing people in schools, universities, commerce and industry, is to seek implementation of a new Education Bill to make radical changes in the education system. The group's aims include a new pattern for children under 14 based on a partnership between home and school; a mixed programme of training, work and education for 14-18-year-olds; and adult retraining rights.

## APT to press for comparability review

Polytechnics are losing out in the battle with universities and the economy at large over recruits because staff salaries are too low, according to leaders of the Association of Polytechnic Teachers.

As well as a salary package amounting to 12.15 per cent, the APT is to press for a comparability review to measure how far polytechnics are slipping behind.

Dr Tony Pountain, APT's national secretary, said: "In the past two years we have fallen behind by something like 15 per cent compared with the salaries of people for whom we have to compete. A lot of particular con-

## College given three options

by Patricia Santinelli

Governors of De La Salle College, Manchester, were meeting today to discuss three Department of Education and Science options on the college's future, one of which would result in its total closure.

The Roman Catholic college has already been ordered to cease teacher training recruitment by 1984. This decision was announced by Sir Keith Joseph in October following a long battle by the college and the Catholic community.

The three options were outlined in a letter sent out to the college by the DES this week. It says the department would not in any way wish to influence the final decision of the governors.

The first option suggests that the college should recruit no students to its BA/BSc courses for 1984 as a preliminary to closure and withdrawal of grant in aid at a point to be discussed.

The second proposes the suspension of recruitment to BA/BSc courses for 1984 pending the expected National Advisory Board review. This decision, it is said, the DES says, would not imply any lack of desire on the part of the college to continue with diversified

courses in the future.

The third suggestion is that the college should seek to establish itself permanently as a diversified institution. This option says the DES was not forced by the secretary of state when he decided to close teacher training, but the college had ruled it out.

The department does point out however that if the governors were to opt for this alternative, they would do so knowing that they would not be exempt from the NAB review, or that like all other institutions it would have to be financially viable.

The department has denied categorically allegations by De La Salle College made in a statement this week that governors withdraw their legal action against the DES because they were promised a reprieve.

The DES says this is quite without foundation. "The DES affidavit of March 1983 said that the secretary of state would review the situation after the court case, whatever the outcome and we have made no promises of an outcome out of a review," a spokesman said.

But according to the college, Sir Keith Joseph had already promised a

review much earlier on in the year. It says that in any case it would have been naive to believe that such an important decision would be taken merely because Sir Keith had proposed to act as judge and jury in a review of his own previous decision.

"The court case was withdrawn because the governors had been led to believe that De La Salle would be reprieved provided that discussions concerning the future of teacher training at the college could take place without the threat of legal action. Honourable and trusting citizens that the governors are, the court case was withdrawn," the statement says.

The college says that, in retrospect, it is now clear that this withdrawal sounded the death knell of teacher training at the college, as legal action was essential to both the future of the college and to the security of Catholic higher education.

The college goes on to say that as additional information accumulated through the hundreds of letters sent out by the DES and from statements made by Sir Keith, it became clear that a deliberate policy had been established which was detrimental to the Catholic community.



Students at the Sussex School of Chiropractic put their best foot forward as Sir Peter Baldwin (left), chairman of the South East Thames Regional Health Authority and head of school Michael Whittington look on. Sir Peter sponsors the scheme by Brighton Polytechnic and Eastbourne Health Authority.

## Milk turns students sour

Glasgow University students last week "queued up for more" round a tureen of cold custard in protest against catering prices.

The students claim that staff are charged substantially less than they are. Glasgow University's student newspaper, the *Guardian* reports that a sandwich costs 46 pence in the student refectory and only 28 pence in the staff dining room, and that students pay 13 pence for a small carton of milk while staff pay 12 pence for a larger one.

Mr Paul Macdill, president of the Students' Representative Council, said students would be pressing at today's catering committee meeting to become involved in food pricing. Glasgow had the most expensive catering service of the eight Scottish universities, he said.

"Meal prices want up 10 per cent this session and snacks went up 6 per cent. We want these lowered to last year's prices and frozen for 12 months," he said.

Professor Lawrence Hunter, convener of the catering committee, said he hoped today's meeting would resolve a number of issues.

## Gravity of Britain's physicists

by Jon Turney

Science Correspondent  
Britain has fewer nuclear physicists per head of population than any other European country except Turkey. A survey of nuclear physics for the European Science Foundation to be published early next year puts these two countries at the bottom of the league along with Greece and Spain.

The committee set up by the foundation, under Professor T. Moyer-Kuckuk of Bonn, compiled figures for both tenured and short-term contract staff in academic laboratories, excluding graduate students. Belgium, Switzerland, Sweden and Germany led the field on this reckoning.

The British position was little better when the number of nuclear physicists was plotted against national income. And while most countries showed a link between total income and support for physicists, the authors of the report describe Britain as a "notable anomaly".

This result for a country normally seen as a moderately generous supporter of basic science emphasizes how selective British science funding has become in recent years. In particular, domestic nuclear physics research has been reduced to maintain participation in international projects like the European Nuclear Research Centre (CERN) in Geneva, and the Institut

## EIS anger at private policy

by Olga Wojtas  
Scottish Correspondent

The Educational Institute of Scotland is threatening a "limited first strike" against the Scottish Business Education Council. The union has been angered by the council allowing private organizations to provide Scot-BEC courses.

The council has accepted some 400 trainees from the South of Scotland Electricity Board and the Scottish Gas Board for its Scottish certificate in vocational studies, and is also to validate several group training agencies.

A strong letter has already been sent to ScotBEC by the EIS further education officer, Mr Arthur Houston, saying that the council is "a product of the public service" since the occupancy of its certificates is based on the professionalism of further education colleges, and it receives substantial funding from the regional authorities.

At today's EIS further education executive meeting, Mr Houston was due to call for a "limited first strike" against ScotBEC beginning from Monday, with a "hit list" of 30 further education colleges where EIS members will boycott ScotBEC exams, and resign from working parties and course committees.

Mr Houston will propose that 10 chief examiners, 20 moderators and 75 markers be withdrawn, as a result of a number of resolutions from colleges demanding immediate action against the council. Today's meeting was to be attended by ScotBEC's chief officer, Mr Andrew Moore, himself a member of the EIS further education section.

Mr Moore said he could appreciate that the EIS had very real fears about potential teacher unemployment if privatization took off, but added he felt it would be a "terrible mistake" to say ScotBEC should not recognize entrants outside the present narrowly defined categories of schools and colleges.

"They don't take that line with the Scottish Examination Board which runs exams for external candidates. Bodies such as the City and Guilds and Royal Society have external entries, and if we do not provide a national qualification in Scottish terms, students will go south."

The EIS supported the Youth Training Scheme, said Mr Moore, and students should not be regarded as second class citizens because they were doing through an employer based scheme. There had to be safeguards ensuring that students did not receive inferior education and training, which meant accreditation of companies by the Manpower Services Commission and validation by ScotBEC and the Scottish Technician Education Council.

## THE TIMES SUPPLEMENTS REPRINT SERVICE

## Robbins to Leverhulme

The Leverhulme programme of study into the future of higher education was organised by the Society for Research into Higher Education with a grant from the Leverhulme Trust and further grants were made by the Gulbenkian Foundation and the Department of Education and Science. The programme consisted of eight seminars the first in April 1981 and the last in September 1982.

An edited four-page version of the final report is now available in reprint form (first published in The Times Higher Education Supplement on 27th May, 1983) price 25p.

Inquiries should be addressed to Frances Goddard, The Times Supplements, Priory House, St John's Lane, London EC1M 4BX. Cheques/postal orders should be made payable to Times Newspapers Limited (no cash please).



## DES 'raids' rich parents

by David Jobbins

The Department of Education is planning a Robin Hood style raid on the rich to ease the financial burdens on middle income parents with children in higher education.

Parents with an income assessed for grants purposes at £24,000 face a 60 per cent increase in the amount by which they are expected to make up their children's grant, from £1,699 this year to £2,703 in 1984-85.

And even at a residual income\* of £16,000 after allowances have been made for mortgage interest, insurance premiums and other factors, the increase is a planned 25 per cent. Meanwhile parents with a residual income of less than £10,000 should be expected to pay less next year.

Plans for a radical adjustment of the impact of the parental contributions scales for 1984-85 were announced by Sir Keith Joseph, Secretary of State for Education, two weeks ago, when he made clear that middle and higher income groups faced higher contributions.

Plans for implementation are now at an advanced stage and an official announcement of scales for 1984-85 is expected much earlier than last year when final details were not forthcoming until early summer, holding up local authorities' calculation of individual assessments.

Proposals circulating within the DES suggest that parents just within the contributions net will have to make a lower proportion of their children's maintenance costs than this year. The thresholds are being increased in line

with average earnings over the past year by 7 per cent, raising the bottom point from £7,100 to £7,620, when a £20 contribution is expected.

At £8,000 the £77 contribution is £71 lower than last year, and even at £10,000 it is £46 lower. But from then onwards the formerly regressive scale of contributions has been replaced with a sharply progressive one.

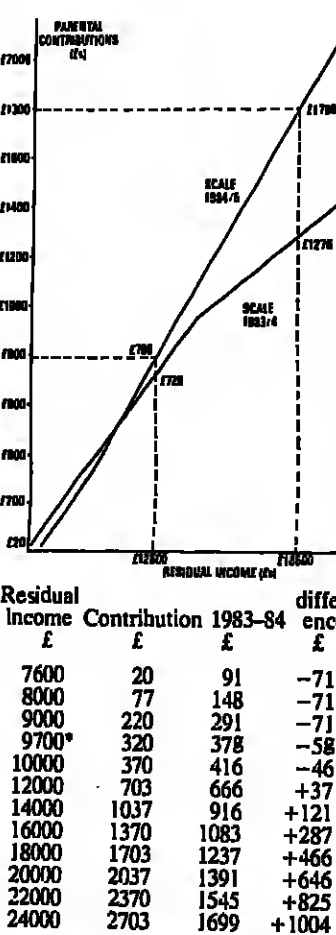
At £12,000 the contribution is 5 per cent up but at £16,000 it is 25 per cent up at £1,370 compared with £1,083 and at £24,000 60 per cent up at £2,703 compared with £1,699.

This radical shift has been achieved by changing the rate of contributions. This year parents with a residual income between £7,100 and £9,000 were expected to contribute one pound in every seven; and above £14,300 one in every eight; and above £14,300 one in every thirteen.

Next year, according to DES proposals, the profile will be almost reversed. The lowest rate is to be abolished, and those above £9,700 are to be expected to contribute one pound in every six, ie more rather than less than the basic rate of one pound in seven.

A student outside London on next year's award of £1,725 whose parents have a residual income of £12,000, will expect £57 more next year than this, according to the National Union of Students.

The parents of a London student on an award of £2,055 will be expected to meet £1,786 of it out of their residual income of £18,500, some £510 more than this year.



\*Point at which the rate changes

## Consumers survey field

One of the first responses to the call for a national debate on the future of higher education has come from the consumers—the students. Birmingham University Guild of Students this week issued the first fruits of a survey of student opinion on some of the key issues in the debate.

And it has produced emphatic opposition to two year degrees, a shift away from arts and humanities, and closure or merger of institutions in the face of declining numbers after 1990. Of 1,643 students responding to the survey, only 9.6 per cent favoured two year degrees coupled with a longer academic year, while 86.6 per cent were against.

On a shift towards science and engineering, only 29.2 per cent were in favour and 63.4 per cent opposed. And only 19.8 per cent supported the closure of a significant number of universities and polytechnics in the 1990s (if numbers fell, with 65.3 per cent against).

There was a large measure of support for the idea of a year's foundation course permitting students to transfer from arts to sciences or vice versa; with 49.2 per cent in favour and 36.6 per cent against.



The Prince of Wales exchanges bows with Sir Donald Barron, chairman of the Midland Bank, on whom he has just conferred an honorary degree at a Council for National Academic Awards ceremony in Edinburgh. Over 80 CNAAs graduates from all over the country were presented to the prince, who praised the CNAAs for enabling people "to take refresher courses and benefit from higher education when they really would appreciate it."

## Wales in bid for Koestler bequest

The University of Wales, encouraged by its chancellor Prince Charles, has put in a bid for the £500,000 bequest left by Arthur Koestler to found the first chair and centre in parapsychology in a British university.

The bid has been made jointly by University College, Cardiff, and Saint David's University, College, Lampeter. Two other bids from City University and Edinburgh University are also being considered by the executor of the Koestler bequest.

Prince Charles wrote a letter to Cardiff soon after details of the bequest were announced, urging the college to apply for the money. The college senate gave the idea its full support.

Dr C.L.W. Bevan, principal of Cardiff, said: "There are a lot of people who look down their noses at this kind of activity. But we are very open-minded lot, and we feel well able to pursue this kind of research."

The main psychology input would

come from the department at Cardiff, which will house the chair and act as the main research base, with the theological and religious input coming from Lampeter, where an associate fellowship would be based.

Dr John Bell of Edinburgh University, who has been successful in his bid for the bequest, said he was making a final decision by the end of the year. He said three serious bids were being considered.

## MSC awaits go-ahead to double adult training numbers

The Manpower Services Commission has published proposals to double the number of adults in training in two years through its adult training strategy.

The strategy, agreed by the commission last week, has been seen by education ministers and the MSC hopes for a response early next year.

The MSC has recognized that it is not the major contributor to adult training. It sees its role as focusing the national debate on priorities and working with others, most notably the Department of Education and Science, and acting as a broker to get common action taken.

The MSC is proposing a national awareness campaign to change the

attitudes of employers, employees and providers towards training. It wants to move towards a more integrated national framework of training.

By the end of the decade it wants to see a coherent framework of training and standard-setting bodies using local testing and validating mechanisms to provide equal access to adults throughout their lives.

Central to the MSC's objectives is local collaboration with education providers and its own programme will largely reflect this shift in emphasis. Some projects will work jointly with the DES' PICKUP programme with financial backing from the department.

A better communications system

built on existing information and training information framework is a more flexible training method and strengthening of the Open Tech scheme.

The MSC's own programme involves a substantial shift of Training Opportunities Scheme money. It is planning its hopes on two main areas: more objective job-related training for employees and a programme to help jobless adults retain their employability.

The job-related programme includes elements to provide guidance to employers for recruiting and training, skills supply training of jobless

## Shift to science could cost Edinburgh £13m

by Olga Wojtas  
Scottish Correspondent

Edinburgh University could lose £13m in income over the next decade as a result of Government policy, its principal has warned. Dr John Burnett, speaking at a graduation ceremony, said the Government wished to see more scientists and technologists, and cost between 80 per cent and 100 per cent more to train than an arts student.

A shift of 100 students at Edinburgh from arts to science would cost more than £300,000 a year, said Dr Burnett, but the university was also being asked to consider a one or two per cent annual reduction in resources over the next 10 years. This, combined with increased training costs could result in a loss of some £8m or £13m by 1993.

If the university were to support science and technology under such circumstances, this could be achieved only by either reducing the arts intake, or reducing financial support for arts-based subjects, "an invidious dilemma," said the principal.

"It is the arts-based subjects that provide those wellsprings which animate man's use of science and technology. It is the social sciences who, through analysis and prediction, enable us truly to assess the consequ-

ences on society of a decade or more of mass unemployment or the true consequences of the revolution in information technology and the microchip society."

Mankind was already at risk through a misguided use of science and technology said Dr Burnett, and the risk would only increase if people ceased to try to understand and improve the societies they had created.

The principal also warned that there would be a crisis in the university if the government insisted on raising 10 per cent of its income, or £5m, from private sources.

Dr Burnett stressed that he was not opposed to the principle of non-Government funding, but said it required a major change in attitude from a public who for almost 40 years had accepted that the state acknowledged responsibility for educating its citizens.

The Government should give more thought to ends and rather less to means, said the principal, who predicted a bleak future for the universities. "Despite having come through the recent difficult period of major volume cuts battered and bruised by the bulk of our teaching capacity intact, I can only see a continuing prospect before us," he admitted.

## Animal pain guide drafted

by Jon Turney  
Science Correspondent

The Royal Society has begun work drafting guidelines to be followed in animal experiments, to supplement the legislation expected to follow the Home Office white paper on the subject earlier this year.

Sir Andrew Huxley explained in his presidential address to the society this week that the guidelines would try and cover details which could not be precisely defined in legislation.

The guidelines will be produced by a group led by Dr Leonard Goodwin, and should be issued jointly by the Royal Society and the Universities Federation for Animal Welfare. They are likely to look in detail at pain suffered by experimental animals.

Sir Andrew himself suggested that "mild" and, if closely scrutinized "substantial" pain were permissible in scientifically promising experiments. But he proposed that severe but short-lived pain should only be permitted very rarely and severe and enduring pain, never.

He accepted that some restrictions on scientific inquiry were justified, but felt that the position upheld by bodies like the British Veterinary Association and the Fund for Replacement of Animals in Medical Experiments—that any procedure involving more than "trivial" degrees of pain should generally be forbidden—was unduly restrictive.

And he attacked "those who regard themselves as justified in grossly misrepresenting the activities of experimentalists," either to sway public opinion against use of animals in research or to sell newspapers.

In contrast to earlier waves of anti-vivisectionist agitation, he said today's "terrorist groups from the Animal Liberation Front break into laboratories and persecute medical and agricultural scientists and use letter bombs to intimidate those who dare remind the public of the benefits that have resulted from animal experiments."

## History snag for the future

Inaccurate Government manpower planning in teacher training will result in a shortage of history teachers in the next three years, Professor Ted Wragg of Exeter University's department of education warned a conference of teaching quality last week.

Professor Wragg told a National Association of Teachers in Further and Higher Education conference in London that there were serious problems in history and in music. Places had been cut back far too drastically in both university and public sector institutions.

"This is the result of inadequate Department of Education and Science projections for teacher numbers. A good example of this is when in 1981 it was predicted that there would only be 69 primary vacancies nationally, yet in Birmingham alone there had been 200," he said.

And because universities were due to lose 10 per cent of their teacher training places, they would also not be able to appoint new staff. This was a time when the average age of teacher training lecturers was between 45 and 55 and there was a desperate need for new primary appointments.

Referring to the proposed National Accreditation Council, Professor Wragg said it was crazy to expect a small group of highly trained people to make up to 10,000 a year which would be impossible for them to coincide with the University Grants Committee and the Council for National Academic Awards visits.

Mr Peter Grange, assistant director of West Sussex Institute of Higher Education who chaired the conference said that there was widespread concern about what appeared to be increasing "centralism".

"This is based on non-existent or at least very flimsy evidence for support and it will do the very opposite of improving teacher quality. Perhaps the central issue is to define what we mean by 'quality' and then decide how to achieve it," he said.

Mr Grange added that there seemed to be an idea abroad that simply improving "subject" quality would in some magical way improve "teaching" quality. This idea was closely associated with traditional subject-based and took little account of social changes or real attempts that had been made in the last 20 years to update the curriculum.

## Back to school

Strathclyde University's English studies department is offering one-day fellowships to school teachers over the next two sessions. Professor Colin MacCabe said the department particularly welcomed applicants wishing to take the advanced certificate in English studies, or to undertake supervised research in English, Scottish or American literature.



## Students will choose own discipline

More than half the students in higher education receive fewer public funds to live on than they would get on the Youth Training Scheme. That is, perhaps, the most stunning figure to emerge from our latest preparations for the annual student grants submission. It means that Sir Keith Joseph's announcement of the outlines of the grants settlement for next year will only be the first round of a protracted battle over the next few months on student finance.

The argument from the student point of view is about a great deal more than money. Status, independence, freedom from parental control and the recognition that students are now in the risk business with no real guarantee of a job at the end have all contributed to a change in attitude among students on the campuses.

In our grants submission we have concentrated on the areas of greatest dispute, students on parental contribution, those who receive the minimum grant and the hundreds of thousands of students in further education who receive no grant at all.

Recognizing the realities of debate in Government circles the National Union of Students went further and identified areas where the Government could transfer hundreds of millions of pounds to establish a minimum grant system and rectify the major injustices in the existing scheme.

Despite the obvious justice of our claim and despite the admission by Mr Peter Brooke, under-secretary of state for higher education, that the existing system is unfair and illogical, the Government has produced a package in which various categories of students are robbed of money to enable ministers to shore up their crumbling credibility in other areas.

It is hardly surprising, however, that major changes in the grants system were not agreed since Sir Keith Joseph, Secretary of State for Education, appears to take little interest in this area of his department's responsibility.

Once you understand the dire financial position that many students are in once you know that Sir Keith Joseph, in contradiction of all that government has said about dialogue with unions, has consistently refused to meet student leaders; and when you add to that the recent blatant breach of the pre-election promise not to cut the universities then you begin to understand the reasons behind the incident at Warwick University.

The action of Warwick University against the student union merely adds another injustice to those felt by students and further polarizes the debate. Professor Jack Butterworth, the vice-chancellor of Warwick, said that he has a responsibility to maintain free speech on his campus.

Free speech is essential to an intellectual and academic community but so also is the pursuit of truth and some attempt at objectivity. By flouting the student union, the authorities at Warwick seemed to have abandoned the latter two principles in favour of wild public gestures to prove their authority over all students.

In attacking the student union the authorities at Warwick are attacking the only real mechanism for self-discipline among students and for dialogue with students. Whether they know it or not, they are going down the same road as those who say the Government can only be made to listen by violence.

Neil Stewart

He is president of the National Union of Students.

## 'Institutions are racist'

by Paul Flather

Higher education institutions practise covert and sometimes overt racism in their policies of access for black students, promotion of black academics and support of black studies courses a new group of academics claimed last week.

Many speakers at the inaugural conference of the Association of African, Caribbean and Asian Academics at Central London Polytechnic referred to the problem of "institutional racism" which they said affected all "white-run institutions" in the country.

Mr Ram Kaushal, senior lecturer and head of community and race relations studies at Edge Hill College,

Launceston, launched a swinging attack on universities, saying that they were the biggest shareholders of institutionalized racism.

He wondered where all the black British students in universities were. "And where are all the courses in Asian studies and Caribbean studies?" he asked. He said universities were keen to run Japanese courses once Japanese money was on offer.

Some 80 black academics, educationists, and students attended the conference. It was the first held by the association, which is open only to blacks and aims to raise issues such as access for black students, bias, and "ethnocentricity" in courses.

Mr Kaushal said: "We have to

shame all the institutions of higher education for their lack of response to our needs." He criticized the inappropriate courses on offer and recalled that his own history textbook while a student at an Indian university had 700 pages of English history and 100 pages of Indian history.

He urged universities to set an example by creating courses linked to areas of interest to blacks. "There is an elusiveness in education that permeates downwards. If it does not happen at the top it has no impact elsewhere."

Speaking afterwards, Mr Kaushal agreed that universities' first aim must be to accept the best applicants. "But the whole point is what is meant by best—who defines it and if enough information about entry is being given in the right places," he said.

Mr Horace Lashley of the Commission for Racial Equality and assistant secretary of the association, blamed "white racism" for the position of blacks, including black academics.

The association decided to: ● Press for new courses on the history, culture and politics in areas like Caribbean and Asian studies, with rights to comment on course content.

● Prepare a directory of black academics and their research interests.

● Publish a newsletter for black academics and prepare a journal reviewing recent work.

Dr Peter Figueroa, lecturer in education at Southampton University, and the association's chairman, said he was very pleased by the energy and range of views put forward.

"We do feel that black academics are under-represented on committees in educational institutions. We feel that the association can help to establish the legitimacy of putting a black view point on education issues in the territory sector."

The Department of Education and Science confirmed that there were no official statistics showing how many black students there were.

Leader, back page

## New bid to set up centre

Warwick University is bidding to set up a Caribbean studies centre that will offer BA and MA courses and act as a focus for all the experts scattered in a number of British universities.

Warwick has put in a £250,000 bid to the University Grants Committee innovation and restructuring fund to create the centre. It feels the subject area has been surprisingly neglected given Britain's obvious ties with the region.

Apart from Warwick the School of Oriental and African Studies at London University offers an MA in Caribbean studies. Kent University offers a joint African and Caribbean studies BA with a strong literature emphasis. Sussex offers some Caribbean studies options and there are specialists at Hull, Oxford, Liverpool and Bradford universities among others.

Goldsmiths' College in London is also creating a centre for Caribbean studies backed by the Greater London Council, to develop the subject particularly in the adult and community fields.

Professor Robin Cohen, professor of sociology at Warwick, said: "There is no doubt there is an enormous gap in the study of the Caribbean in Britain. There are courses in every other world area but Caribbean studies is usually subsumed under Latin American or American studies."

Dr Lyn Innes, lecturer in African and Caribbean studies at Kent University said there had been more than 100 applications for 10 to 12 places on the Kent course this year, almost treble the number four years ago.

Warwick has already won a £75,000 grant from the Leverhulme Trust to run a five-year programme to host Caribbean academic visitors.

## Universities 'slow to help'

Universities have been much slower than the public sector in helping ethnic minority students win places in higher education, Sir Roy Marshall, vice-chancellor of Hull University, told the association.

Sir Roy was speaking on the higher education response to British ethnic minorities. He called for more special access courses of the sort pioneered by a number of local authorities in conjunction with colleges and polytechnics.

But he warned of a long hard road ahead and said that a time when the Government was reducing higher education places it would be increasingly difficult for ethnic minority students to gain entry.

"The university system has not really addressed its mind to the problem of access for ethnic minorities. A lot of consideration is given to access for overseas students, but hardly any for ethnic minorities who are citizens of this country," he said.

Sir Roy, who comes from Barbados, said the chances of getting into higher education often depended on the dress

or group to which one belonged. The student of high ability and high social status had a better chance than the student of equally high social ability but low status.

"It is not a question of deliberate bias in the university system of selection. Nevertheless there has been no significant increase in the working-class entry to higher education despite the post-war expansion and this affects blacks," he said.

He supported the imaginative access courses run by local authorities—including Bradford and the Inner London Education Authority—to help prepare black students for further or higher education and urged universities to think along similar lines.

But he painted a gloomy picture for the future, with widespread pessimism in general attitudes to higher education, fewer mature student places and increasingly tough selection processes.

He warned of great inertia in the university system. "There is a tremendous amount to be overcome," he said.

## Council plans for the worst

The Agricultural and Food Research Council is planning for the worst next year and its new corporate plan, to be approved later this month, envisages 200 lost jobs next year.

However, Dr Ralph Riley, the council's secretary, reaffirmed the AFRC's determination to increase support for university research this week.

Introducing the council's 1982/83 annual report, Dr Riley said he was planning on the assumption that the Advisory Board for the Research Council's decision to cut his council's budget from next year would stand.

He said that the need to cut some programmes bank while expanding or starting others gave the council the kind of management problem few organizations have faced.

The AFRC-supported institutes already around with rumours about when and where the cuts will fall, but the council have not yet been formally identified. However, the council has pointed to the research areas to be cut.

In arable crops, cereal production, livestock diseases, fruit and crop protection.

At the same time, the council wants to increase support for areas including food technology, plant metabolism, animal behaviour and hormones, human nutrition and electronic sensors.

Mr Geoffrey Myers, under-secretary to the AFRC, said they were studying ways of backing more research on short-term contracts.

Some of these contracts may well be in universities, and Dr Riley revealed that the first two agreements for joint research between AFRC institutes and university groups were nearing completion—between the Cavendish Laboratory and the Food Research Institute, and between the University of Bristol's physics department and the Meat Research Institute.



Glasgow University's Hunterian Art Gallery is holding an exhibition of the work of Margaret Macdonald Macintosh. This pen and ink and watercolour drawing of "Summer" is in it.

## Natfhe women to defy executive over seats

by David Jobbins

Female activists are to defy leaders of the college lecturers' union and try to create reserved seats for women on key decision-making bodies.

At least three regions of the National Association of Teachers in Further and Higher Education are to discuss tomorrow whether rule changes should be tabled for next year's annual conference, setting aside seats for women on the union's national executive and national council.

Women behind the move are angry that the union's national executive shelved recommendations of a special group set up to consider the issues in favour of a declaration of support for the principle of reserved seats, and indicated it would not support rule changes for 1984. Instead the executive, which was far from united on the question, favoured an extended debate and careful monitoring of how existing policies are working towards increased participation by women in the union's activities.

Rule changes were tabled by the northern region for the 1983 conference but remitted when the executive announced it was settling up a working group to examine how best to tackle the problem. Many activists expected that when the working group reported in favour of rule changes, the executive would table its own proposals for 1984.

Others believe that the declaration of support in principle by the executive

is the best that can be achieved and fear that premature consideration of rule changes may jeopardize chances in later years.

But Ms Daphne Hoffman, vice chair of the working panel, said: "The rule changes were remitted at this year's conference on the clear understanding a special panel would be set up to advise the executive, and rule changes would be formulated for 1984. It was a surprise to some of us most intimately involved in the panel that although the executive accepted it in principle, they were not prepared to put it into practice for this year."

She does not think any of us who strongly support reserved seats necessarily think we are going to win the first time around. But it is important to keep the issue in front of the membership by bringing forward rule changes."

East Midlands, Ms Hoffman's region, is one of those discussing proposals. In its case, four extra seats on national executive and 20 on national council would be created so that extra women could be elected without displacing men to bring female representation close to its proportionate level among the members.

Currently, some 27 per cent of Natfhe members are women but there are only two women on the national executive. At the local negotiations level, only 4.6 per cent of liaison committee secretaries are women.

The rule changes will need a two-thirds majority of conference.

## Liverpool v-c warns of change in cuts policy

Universities must be saved from further cuts in government funding if they are to repair damage caused by reduced incomes, according to the vice-chancellor of the University of Liverpool.

In his speech to



## overseas news

## Increase in US enrolments

from E. Patrick McQuaid  
WASHINGTON

Despite a shrinking pool of 18-year-olds, enrolments in American colleges and universities this term hit 12.7 million, up just over 1 per cent from last year.

According to the Association Council for Policy Analysis and Research, a coalition of Washington-based higher education organizations, much of the boost overall can be attributed to a "surprising" number of part-time enrolments. Mr Douglas Conner, executive director of the association, noted that while the overall head count may be higher, in contrast to demographic studies predicting a 25 per cent decrease in primary college age population between 1979 and 1990, "enrolment patterns are changing".

The rise in part-time students is noted for both the public and private sectors. "Trade schools," said Mr Conner, "have been pushing full-time attendance for a while now," noting that unemployment may make full-

time studies more attractive for trade school students.

Elsewhere, some more surprising figures are reported by the National Institute of Independent Colleges and Universities. For the nation's 52 Catholic women's colleges, enrolments have grown faster and higher than for any other segment of the private sector. Colleges and universities affiliated or maintained by the Roman Catholic Church have experienced steady growth annually since 1978, according to a study by Notre Dame economist, Father Ernest Bartell.

For total enrolments, enrolment of full-time, part-time students, males, females, undergraduates and graduate students, Father Bartell reports that Catholic higher education has outpaced the entire independent sector.

In addition, growth in minority enrolments between 1978 and 1981 was greater in Catholic higher education than elsewhere in the independent sector, he said, and by 1981 minorities represented a larger share of total

enrolment in Catholic institutions than in other independent colleges and universities.

Financially, though, Catholic women's colleges have suffered more than their share since 1978. All of the institutional closing in the Catholic sector have been women's institutions, according to his report. *Trends in Enrolment and Finance*, published by the Association of Catholic Colleges and Universities, a wing of the national institute.

Catholic women's colleges are defined as those with less than 15 per cent male enrolment. Five Catholic women's colleges shut down during the study period, but overall, enrolments grew at 11.4 per cent, which is 11 per cent faster than in all combined enrolments for Catholic higher education.

Part-time enrolments at Catholic women's colleges was double the rate of growth throughout the Catholic sector, while Father Bartell attributes to "institutional efforts to extend programme offerings to new clientele," in older women in the workforce.

## Australians to set up youth support scheme

from Geoff Maslen

MELBOURNE

The Australian government plans to introduce a national youth income support scheme to meet the needs of Australia's tertiary students, young people in training and those in the post-compulsory years of schooling.

The scheme would replace the present secondary and tertiary education allowance schemes and, eventually, dole payments to unemployed teenagers. It would not apply universally, at least in the short term, according to the federal minister for education and youth affairs, Senator Susan Ryan. The simplest method would be a universal payment to young people at a level they could live on. "Initially, that would be too expensive so we need to look at some way of targeting the groups who need support, without setting up a system that is as anomalous as the tertiary assistance scheme," Senator Ryan said, following a trip to UNESCO in Paris and the Scandinavian countries to study youth income and training policies.

At present, an OECD review team is in Australia at the invitation of the government to carry out an investigation into youth income and training policies. The team has been presented with a brief by the government and will be consulting with government departments and education groups across the country.

At the end of its visit, the team will produce a draft paper putting certain observations and proposals forward. The government has already prepared its own submission to go to the OECD team. The paper presents a gloomy picture of future prospects for Australia's young people. Youth unemployment is likely to continue at a high level, the paper states.

"There seems to be a real possibility that youth employment rates may not recover, even in the longer term," the paper says. The paper canvasses a range of reforms and initiatives in youth policy such as:

- Some form of "youth guarantee" (and appointments to the public service) would be on an ethnic ratio.
- The academics point out that the cut-off point for admissions to faculties of medicine from districts like Colombo and Jaffna fluctuates around 10 marks for district quota admissions while for certain other districts it is around 180 marks.

This means that a large number of candidates scoring even averages of over 60 in each of the four subjects are automatically denied university places under the present system. It cannot be denied that, while trying to compensate for possible injustices stemming from disparity to facilities distribution, a much greater injustice is being perpetrated.

The assessment is made in a memorandum sent by the academics to the committee appointed by the University Grants Commission to review the system, after the government



Susan Ryan: a great deal of planning

whereby the government provides alternative opportunities in education, training and employment for a particular group such as school-leavers who otherwise face unemployment.

● Offering an allowance to students in secondary school and tertiary education which is so generous it does not become a disincentive to the labour force.

● Payment of the secondary allowance, as with the tertiary allowance, direct to students rather than their parents.

● Payment of a universal youth allowance to all those aged between 16 and 24.

The OECD team will focus on the areas already being developed by Senator Ryan's office: youth allowances, alternative forms of work as cooperatives and communes, and increasing retention and participation rates in education.

Senator Ryan said a great deal of planning has already gone into the development of a national policy for youth. Following the absorption of the office of youth affairs from the employment ministry into the department of education, it had been upgraded and the groundwork laid for a policy, rather than a consultative, role.

## Admissions schemes 'unfair'

from D. B. Udalgama

COLOMBO

The present system of university admissions denies candidates their right to places and Sri Lanka the services of the best of its potential human resources. This assessment of the system which has been in operation for four years has been made by five professors and a senior research officer.

Admissions are now based on 30 per cent merit, 35 per cent district quotas and 15 per cent allocation to backward areas.

The assessment is made in a memorandum sent by the academics to the committee appointed by the University Grants Commission to review the system, after the government

simply are not enough employers prepared or able to take on new graduates. There is a limit on the number of employers who can be assisted by such things as tax concessions to take on new graduates. Third, there is the additional cost to public money which the system of sandwich courses imposes. It is a difficult issue for a government already trying to boost the economy without getting caught in an inflationary spiral.

The recently-introduced system of devolved government through the regions, and the enormous differences between the regions, create a fourth serious obstacle to address. It was agreed at the end of the seminar to set up a pilot scheme possibly in naval architecture or computing, and to arrange a trip to England, when the Spanish government announced that in the field of engineering, for instance, last six years. Second, the majority of employers are small businesses; there

## A change of climate in Madrid

Sarah Jane Evans reports on how UK ideas are beginning to influence Spanish education

Historically, Spain has looked to France, in particular, and in Germany, for educational models and strategies. In most areas, the UK has been kept at arm's length, and not only in educational matters. In the case of the UK, the recent visit by a British group to Madrid at the invitation of the Spanish Ministry of Education may be a sign that things are changing.

The object of the group's visit was sandwich courses, and they took part in a two-day seminar to study the British experience and explore the possibilities for Spain's polytechnics and universities. The discussions soon uncovered serious difficulties in applying the British model to Spain, in such fundamental areas as economic organisation and government control.

The seminar came about as the result of a recommendation by Mr A. Daniels of Brunel University and chairman of ASET (the Association for Sandwich Education and Training), and Mr J. Ayer of Middlesex Polytechnic, during a visit to Spain in



Felipe Gonzalez: concerns about high drop-out rate.

July 1982, and they were building on contacts made some years previously. A few higher education specialists in Spain had already gained some experience in sandwich courses, notably at the

Polytechnic University of Barcelona. Not all the experience was good. The University's attempt at a sandwich-type course four years ago had not been a success.

Today, the educational climate in Spain has changed. In general, the year-old socialist government of Felipe Gonzalez has been concerned with the very high drop-out rate in Spain's universities, the low vocational content of most courses, and the lack of close cooperation between academic research and industry. This last was a deliberate policy of the previous government, up until now, selling their research to industry, or setting up commercial research companies under the aegis of their universities. The new University Reform Law will open up the avenues for increased collaboration between the two sectors, and the Ministry of Education now has the potential for sandwich courses to make the process

while also increasing the vocational content of courses.

The British delegation included representatives from the CBI, the TUC and Ford Motor Company, as well as Alan Daniels, Malcolm Brewster of Sheffield Polytechnic, ASET's secretary, and Dr Leslie Davies of Salford, chairman of the Universities Committee on Integrated Sandwich Courses. The Spanish team was headed by Mrs Carmela Virgili, the Secretary of State in charge of Universities and Research, and included representatives from the Polytechnic Universities of Madrid and Barcelona, the Spanish CBI, the communist trade union CCOC, and two educationalists.

But Spain remains very much the outsider. First, there is the problem of fitting in the practical element to already lengthy university courses. Engineering, for instance, lasts six years. Second, the majority of employers are small businesses; there

simply are not enough employers prepared or able to take on new graduates. There is a limit on the number of employers who can be assisted by such things as tax concessions to take on new graduates. Third, there is the additional cost to public money which the system of sandwich courses imposes. It is a difficult issue for a government already trying to boost the economy without getting caught in an inflationary spiral.

The recently-introduced system of devolved government through the regions, and the enormous differences between the regions, create a fourth serious obstacle to address. It was agreed at the end of the seminar to set up a pilot scheme possibly in naval architecture or computing, and to arrange a trip to England, when the Spanish government announced that in the field of engineering, for instance, last six years. Second, the majority of employers are small businesses; there

simply are not enough employers prepared or able to take on new graduates. There is a limit on the number of employers who can be assisted by such things as tax concessions to take on new graduates. Third, there is the additional cost to public money which the system of sandwich courses imposes. It is a difficult issue for a government already trying to boost the economy without getting caught in an inflationary spiral.

The recently-introduced system of devolved government through the regions, and the enormous differences between the regions, create a fourth serious obstacle to address. It was agreed at the end of the seminar to set up a pilot scheme possibly in naval architecture or computing, and to arrange a trip to England, when the Spanish government announced that in the field of engineering, for instance, last six years. Second, the majority of employers are small businesses; there

## South Africa stands by separatist policy

from Carolyn Dempster

JOHANNESBURG

The government this week reaffirmed its commitment to separate ethnic education when it put the stamp on the future course of education in South Africa. The guidelines were contained in the De Lange report on education, completed in July 1981.

Several key recommendations of the commission have been rejected, but many of the more practical and financial proposals are to be adopted.

Students will continue to attend separate ethnic schools and universities in line with apartheid policy. There are to be five ministers of education instead of the recommended single ministry of education (including the ministry of education in the self-governing and independent homelands this brings the number to 15) and the black community have once again largely been left out of the decision-making structures.

In line with the new constitution, whites, coloureds and Indians will be able to select their own ministers of education and education for the different groups will be discussed under "own affairs" at parliament level. In addition to these three ministers, there will be another minister and member of the cabinet who will oversee education matters which fall into the category of "general affairs". Black education will be attended to by the minister heading the education and training department (black education).

What is immediately apparent in the white paper is that while the overall structure of the education system will change, the essential apartheid policies remain entrenched.

However, the government has made a firm commitment to equal quality in education which points to ever-increasing spending on black education, and the improvement of schooling and technical facilities for blacks.

Most of the improvements are to be

effected in the areas of school education and teacher training. The government has approved the establishment of a statutory body - the South African Council of Education which will advise the government on white, coloured and Indian education interests.

At tertiary level, the committee of heads of education, an advisory body, will be extended to include the heads of coloured and Indian universities. An advisory council on university and technicians is also established to advise the various ministers in these areas.

Professor Pieter De Lange, the chairman of the commission, hailed the white paper as a breakthrough in terms of financial and political realities.

Other reaction in the government response has not been so favourable. Prominent coloured educationist Mr Franklin Senn said it was deplorable the government refused to waive the group areas act, which determines different race groups live in separate

areas, to allow empty schools for one race group to be utilized by pupils from another race group. He also condemned the government's rejection of a single ministry of education and their reluctance to open universities and technicians.

In the end the white paper may be evaluated in terms of the needs the commission was created to meet. The De Lange investigation and report arose mainly from the 1976 riots in Soweto when schoolchildren rebelled against the poor quality of education and this exploded into a violent rebellion against the system of oppression as a whole.

The 1980 school boycotts by coloured and black schoolchildren further demonstrated the crisis and the necessity for change. In terms of these pressures and needs the white paper does little to diffuse dissatisfaction in what remains essentially an apartheid system.

## Minister opens contest

from Barbara von Ow

MUNICH

More competition within and among West German universities is the theme of Bonn's higher education policy for the next decade as outlined by education minister Dorothee Wilms last week. In 16 theses on the structure of higher education in the 1990s Frau Wilms called for a revival of the universities' traditional competition for academic excellence. In the competition - on the basis of difference and diversity - the universities should vie for research funds, more qualified teachers and students.

To attract research funds the universities' autonomy had to be strengthened. The competition between state universities and private research institutes had to be fair. Of a total of DM20 billion invested by West German industry into research and development last year, only DM120 million went to universities (the Bonn and Länder governments spent DM6 billion on university research in 1982). Only if they prove their competitiveness, universities could hope to attract more private funds, Frau Wilms said.

Many highly qualified German graduates found no academic jobs because they were often blocked by insufficiently qualified teachers taken on in the 1970s. In addition the mobility of academic teachers was further threatened if the government accepted a draft law passed by the Bundestag recently which would further cut their allowances.

On students Frau Wilms wrote that at present the universities were being leagued by more students than they could cope with but this would change in the 1990s as a result of the slump in the birth rate. To attract the dwindling number of students, universities would have to develop "distinct profiles" with competitive degree courses.

The key to competition was diversity, she noted. It was in this respect that the comprehensive universities backed by the former Social-Liberal coalition had failed. While not wishing to abolish them she wanted the comprehensive universities to defend their existence in competition with others. The polytechnics, on the other hand, were very well placed and would be even more so if they strengthened the practical side of their courses.

The transition from school to university had to be improved and would be students better prepared for higher education. But Frau Wilms made no reference to the widely discussed idea of transforming the thirteenth school year into a special "transitional year".

While rejecting the controversial concept of short term degrees, Frau Wilms called for university degree courses to be limited on principle to 12 semesters, against an average of 12.1 at present. Shorter degrees, however, were no viable solution in view of the existing employment situation, she claimed. This was widely opposed by members of the West German rectors' conference who met Frau Wilms for discussions in Bonn earlier this month. The rectors of Berlin and Konstanz university and the president of the conference, Professor Theodor Berchem, were among those who strongly defended the idea of shorter degrees.

## Chinese learn to manage

by Thomas Lund

The World Bank's Economic Development Institute has produced a series of training courses in national economic management for China's top civil servants. The courses, necessitated by the bank's investment so far of \$948.5m in China - a good deal of it in higher education - break new ground by providing development planning tools applicable to different cultural and economic environments.

Similar courses may well be made available to people in the highest levels of economic and social planning in many developing regions - enabling them to put their limited financial resources to maximum use.

The training scheme is about to be evaluated with a view to its adaptability to other countries. It began three years ago with the visit of 30 high-level Chinese civil servants to the bank. The party comprised directors and deputy directors of departments and their senior officials involved in the development of the national economy.

Since then, about 650 top Chinese managers, bureaucrats and specialists have attended courses evolved for the country's specific needs by the bank's Development Institute.

Each class has about 40 participants comprising graduate students and civil servants. Several observers also attended.

## Brain exports 'sap strength'

from P.E. Burke

OKLAHOMA CITY

One of the growing "invisible exports" of the United States is the giving of university courses abroad by the universities using specialists from their faculties. In addition to ordinary undergraduate courses, American universities are now supplying to an increasing extent courses in business administration and high technology subjects.

Some of these courses are for members of the US armed forces stationed abroad but increasing numbers are for private enterprise, especially the empires of US corporations with interests in the Middle East and Far East.

Many of the courses abroad are being given during the US academic year and thus the home students are being deprived of the services of the professors and specialists involved. This academic year for example, the University of Oklahoma has 65 courses in 15 fields around the world, including China, Panama, Germany, Spain, Hawaii, Japan, Okinawa, Korea and Saudi Arabia, while Oklahoma State University is heavily involved in Jordan.

Following complaints about the absence of lectures at the home university, the Oklahoma State Regents for Higher Education has threatened that it will not approve any further rounds of foreign classes without a proper vetting and detailed explanation from the two university departments.

## Science dean faces action over unfair dismissals

from Bernard Kennedy

ANKARA

The dean of Ankara University's troubled science faculty is facing legal and disciplinary action over alleged unfair dismissals. Professor Sevin Karol is alleged to have "caused the departure" from the university of no less than 100 teaching and administrative staff, and the case obviously has wide implications in a country where job security at the universities has fallen to an all-time low.

Since the Higher Education Council bill became law in 1981, which sharply reduced tenure, scores of university lecturers have suddenly found themselves without a job after the non-renewal of their contracts. Often, they have been informed that they were surplus to requirements, although there are known to be serious staff shortages at many faculties around the country. If Professor Karol were to be disciplined or removed from his post, this might make the consequences at other universities think twice before dismissing staff. It might even lead to the opening of several similar cases against other top administrators.

Professor Karol actually faces two separate inquiries, one by an administrative court in Ankara, the other by the disciplinary organ of the powerful Higher Education Council. The court case has been brought by dismissed research biologist Dr Atilla Yanikoglu.

Each class has about 40 participants comprising graduate students and civil servants. Several observers also attended.

## Soviets sign agreement with Vietnam

Soviet-Vietnamese cooperation in education and science is to be intensified under a long-term agreement signed in Hanoi on October 31.

The agreement was the high point of an official visit to Vietnam by Gaidar Aliev, a Politburo member who has been named recently by many Soviet watchers as a possible successor to Mr Yuri Andropov as party leader.

The agreement includes:

- charting out scientific research programmes related to the needs of the Vietnamese economy;
- broader participation of Soviet institutes and universities in research projects which are already under way;

The transfer of Soviet research results and documents to Vietnam

Increased Soviet aid to equip Vietnamese laboratories

expanding cooperation in personnel training.

The training of Vietnamese students and engineers in the Soviet Union and in other countries of the Socialist bloc has been a major feature of cooperation programmes since Vietnam entered Comecon in 1979. During the last 18 months, however, there have been numerous unofficial reports that many of these students receive little or no training, but are simply employed as unskilled or semi-skilled labour.

The Soviet authorities, however, strongly deny such claims and maintain that students who work in construction or transport are simply doing the necessary practical background to their theoretical studies.

For example in Czechoslovakia in September 1982, there was a strike of "students" employed on building sites, who demanded better living conditions and a rice-based diet and from the Azerbaijan. The latter batch of students, who were promised training as "transport engineers" were reportedly simply taught to drive a lorry and then employed in heavy haulage work.

The Soviet authorities, however, strongly deny such claims and maintain that students who work in construction or transport are simply doing the necessary practical background to their theoretical studies.

For example in Czechoslovakia in September 1982, there was a strike of "students" employed on building sites, who demanded better living conditions and a rice-based diet and from the Azerbaijan. The latter batch of students, who were promised training as "transport engineers" were reportedly simply taught to drive a lorry and then employed in heavy haulage work.

The Soviet authorities, however, strongly deny such claims and maintain that students who work in construction or transport are simply doing the necessary practical background to their theoretical studies.

For example in Czechoslovakia in September 1982, there was a strike of "students" employed on building sites, who demanded better living conditions and a rice-based diet and from the Azerbaijan. The latter batch of students, who were promised training as "transport engineers" were reportedly simply taught to drive a lorry and then employed in heavy haulage work.

The Soviet authorities, however, strongly deny such claims and maintain that students who work in construction or transport are simply doing the necessary practical background to their theoretical studies.

For example in Czechoslovakia in September 1982, there was a strike of "students" employed on building sites, who demanded better living conditions and a rice-based diet and from the Azerbaijan. The latter batch of students, who were promised training as "transport engineers" were reportedly simply taught to drive a lorry and then employed in heavy haulage work.

The Soviet authorities, however, strongly deny such claims and maintain that students who work in construction or transport are simply doing the necessary practical background to their theoretical studies.

For example in Czechoslovakia in September 1982, there was a strike of "students" employed on building sites, who demanded better living conditions and a rice-based diet and from the Azerbaijan. The latter batch of students, who were promised training as "transport engineers" were reportedly simply taught to drive a lorry and then employed in heavy haulage work.

The Soviet authorities, however, strongly deny such claims and maintain that students who work in construction or transport are simply doing the necessary practical background to their theoretical studies.

For example in Czechoslovakia in September 1982, there was a strike of "students" employed on building sites, who demanded better living conditions and a rice-based diet and from the Azerbaijan. The latter batch of students, who were promised training as "transport engineers" were reportedly simply taught to drive a lorry and then employed in heavy haulage work.

The Soviet authorities, however, strongly deny such claims and maintain that students who work in construction or transport are simply doing the necessary practical background to their theoretical studies.

For example in Czechoslovakia in September 1982, there was a strike of "students" employed on building sites, who demanded better living conditions and a rice-based diet and from the Azerbaijan. The latter batch of students, who were promised training as "transport engineers" were reportedly simply taught to drive a lorry and then employed in heavy haulage work.

The Soviet authorities, however, strongly deny such claims and maintain that students who work in construction or transport are simply doing the necessary practical background to their theoretical studies.

For example in Czechoslovakia in September 1982, there was a strike of "students" employed on building sites, who demanded better living conditions and a rice-based diet and from the Azerbaijan. The latter batch of students, who were promised training as "transport engineers" were reportedly simply taught to drive a lorry and then employed in heavy haulage work.

The Soviet authorities, however, strongly deny such claims and maintain that students who work in construction or transport are simply doing the necessary practical background to their theoretical studies.

For example in Czechoslovakia in September 1982, there was a strike of "students" employed on building sites, who demanded better living conditions and a rice-based diet and from the Azerbaijan. The latter batch of students, who were promised training as "transport engineers" were reportedly simply taught to drive a lorry and then employed in heavy haulage work.

The Soviet authorities, however, strongly deny such claims and maintain that students who work in construction or transport are simply doing the necessary practical background to their theoretical studies.

For example in Czechoslovakia in September 1982, there was a strike of "students" employed on building sites, who demanded better living conditions and a rice-based diet and from the Azerbaijan. The latter batch of students, who were promised training as "transport engineers" were reportedly simply taught to drive a lorry and then employed in heavy haulage work.

The Soviet authorities, however, strongly deny such claims and maintain that students who work in construction or transport are simply doing the necessary practical background to their theoretical studies.

For example in Czechoslovakia in September 1982, there was a strike of "students" employed on building sites, who demanded better living conditions and a rice-based diet and from the Azerbaijan. The latter batch of students, who were promised training as "transport engineers" were reportedly simply taught to drive a lorry and then employed in heavy haulage work.

The Soviet authorities, however, strongly deny such claims and maintain that students who work in construction or transport are simply doing the necessary practical background to their theoretical studies.

For example in Czechoslovakia in September 1982, there was a strike of "students" employed on building sites, who demanded better living conditions and a rice-based diet and from the Azerbaijan. The latter batch of students, who were promised training as "transport engineers" were reportedly simply taught to drive a lorry and then employed in heavy haulage work.

The Soviet authorities, however, strongly deny such claims and maintain that students who work in construction or transport are simply doing the necessary practical background to their theoretical studies.

For example in Czechoslovakia in September 1982, there was a strike of "students" employed on building sites, who demanded better living conditions and a rice-based diet and from the Azerbaijan. The latter batch of students, who were promised training as "transport engineers" were reportedly simply taught to drive a lorry and then employed in heavy haulage work.

The Soviet authorities, however, strongly deny such claims and maintain that students who work in construction or transport are simply doing the necessary practical background to their theoretical studies.

For example in Czechoslovakia in September 1982, there was a strike of "students" employed on building sites, who demanded better living conditions and a rice-based diet and from the Azerbaijan. The latter batch of students, who were promised training as "transport engineers" were reportedly simply taught to drive a lorry and then employed in heavy haulage work.

The Soviet authorities, however, strongly deny such claims and maintain that students who work in construction or transport are simply doing the necessary practical background to their theoretical studies.

For example in Czechoslovakia in September 1982, there was a strike of "students" employed on building sites, who demanded better living conditions and a rice-based diet and from the Azerbaijan. The latter batch of students, who were promised training as "transport engineers" were reportedly simply taught to drive a lorry and then employed in heavy haulage work.

The Soviet authorities, however, strongly deny such claims and maintain that students who work in construction or transport are simply doing the necessary practical background to their theoretical studies.

For example in Czechoslovakia in September 1982, there was a strike of "students" employed on building sites, who demanded better living conditions and a rice-based diet and from the Azerbaijan. The latter batch of students, who were promised training as "transport engineers" were reportedly simply taught to drive a lorry and then employed in heavy haulage work.

The Soviet authorities, however, strongly deny such claims and maintain that students who work in construction or transport are simply doing the necessary practical background to their theoretical studies.

For example in Czechoslovakia in September 1982, there was a strike of "students" employed on building sites, who demanded better living conditions and a rice-based diet and from the Azerbaijan. The latter batch of students, who were promised training as "transport engineers" were reportedly simply taught to drive a lorry and then employed in heavy haulage work.

The Soviet authorities, however, strongly deny such claims and maintain that students who work in construction or transport are simply doing the necessary practical background to their theoretical studies.

For example in Czechoslovakia in September 1982, there was a strike of "students" employed on building sites, who demanded better living conditions and a rice-based diet and from the Azerbaijan. The latter batch of students, who were promised training as "transport engineers" were reportedly simply taught to drive a lorry and then employed in heavy haulage work.

The Soviet authorities, however, strongly deny such claims and maintain that students who work in construction or transport are simply doing the necessary practical background to their theoretical studies.

For example in Czechoslovakia in September 1982, there was a strike of "students" employed on building sites, who demanded better living conditions and a rice-based diet and from the Azerbaijan. The latter batch of students, who were promised training as "transport engineers" were reportedly simply taught to drive a lorry and then employed in heavy haulage work.

The Soviet authorities, however, strongly deny such claims and maintain that students who work in construction or transport are simply doing the necessary practical background to their theoretical studies.

For example in Czechoslovakia in September 1982, there was a strike of "students" employed on building sites, who demanded better living conditions and a rice-based diet and from the Azerbaijan. The latter batch of students, who were promised training as "transport engineers" were reportedly simply taught to drive a



Severely handicapped university students are exceptional in two important senses. To retrain university they have to overcome severe academic and practical hurdles which make university entrance a far more demanding task than for others.

Because of these obstacles, there are still, regrettably, many fewer handicapped students than there should be if the proportion of people with disabilities in the wider population was reflected in enrolments.

Hard facts are hard to come by, partly because definitions of disability are imprecise and partly because no one has carried out a comprehensive survey since the early 1970s.

In 1974 the National Institutions Centre found that while the proportion of disabled people excluding those with sensory impairment was two in every 1,000 people aged 16-25, the proportion for students including those with sight and hearing difficulties was just two in every 1,000 students.

If disabled students directly reflected the number of people in their general age group, a university with 5,000 students should have 45 disabled students.

With the growing recognition, spurred by the Warnock report, that disabled people should be drawn into the wider community almost all universities and polytechnics have adopted a far more encouraging attitude to disabled applicants.

Some argued that positive discrimination was necessary to give the disabled their rightful place in higher education as in the rest of society. Among them was the late Lord Boyle, vice-chancellor of Leeds University, who has been a pioneer of higher education opportunities for handicapped.

The early 1970s saw a number of notable advances. Several examples followed Leeds's example and made public declarations of intent to try to help the handicapped overcome the barriers. Sussex University opened Kulukundis House, where the severely handicapped could be given all necessary care while pursuing the studies. In Oxford, the Bodleian Library opened a specially equipped reading room for the blind, with a Braille machine and tape recorder.

But despite this near-frenzy of activity, all the available evidence suggests that the ration of disabled students has not improved markedly. It would be perhaps unrealistic to expect the proportion to mirror exactly that found in the comparable age group in the wider community, but there is considerable anxiety at the failure to make progress despite the efforts.

"That anxiety is worsened by the

foars expressed by the Association of University Teachers, which has a well-developed policy towards increased access for groups such as the disabled, that even those areas where limited progress are vulnerable at times of financial restraint.

Many universities now have advisory committees to tackle the issues that doleer handicapped people or make campus life unnecessarily difficult for them. Most are working well, a few particularly those locked into the full academic decision-making structure of the institution - very well. Most have a member of staff responsible for the disabled.

But Mr Richard Stowell, director of the National Bureau for Handicapped Students, says: "Although advisory committees have been set up to formulate policies, there are still problems in putting these policies into practice. This is particularly the case in universities where the admissions policy is dictated by the department rather than centrally."

Lord Boyle's demand for positive discrimination in admissions policies is dismissed by a minority among the disabled. Mr Stowell says: "Some will argue that there should be no positive discrimination because this will devalue the degree at the end of their course. But the vast majority would

argue there is a need to take account of handicap."

But the effect of some institutions moving far faster than others has led to another serious problem - that of "ghettoizing" of the handicapped. Universities which have shown the way, such as Leeds and Durham, not unnaturally attract successive generations of handicapped students.

Few people among those exceptional individuals who have fought for a place in higher education seek out the additional bother of "pioneering" at a college which lacks the expertise they need, particularly if they are severely disabled. There are also compelling practical reasons: not only with that expertise have been developed over the years but teaching aids and materials are almost certain to be readily available. There will be other students with common problems to discuss difficulties with and to learn from.

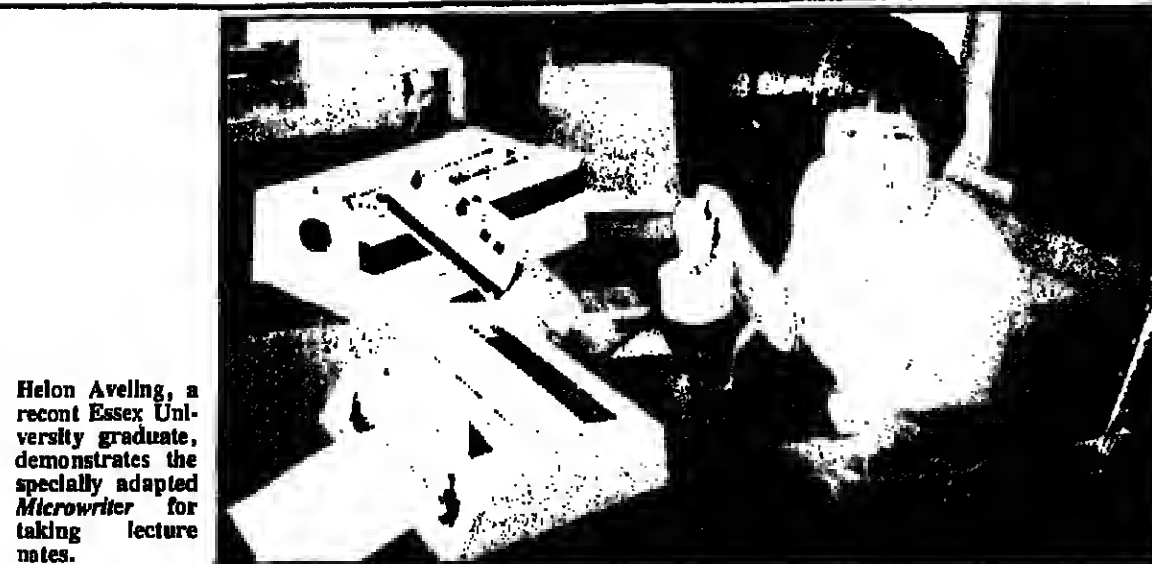
Despite these attractions there are good social and academic reasons why prospective students should not instinctively opt for such a choice. Mr Stowell said: "The ghetto approach limits the choice of degree. If as a blind student you are limited to half a dozen universities, it is hard luck if the course you want to take is somewhere else."

It is probably with blindness or impaired sight that the greatest steps have been taken. Each year, according to the Royal National Institute for the Blind, some 250 students in these categories enter higher or further education.

In the past 15 years, according to an RNIB survey, blind students have successfully studied at every university, 28 out of 31 polytechnics, 49 colleges of education or higher education, and 170 further education colleges.

Practical difficulties such as moving around the campus are no more difficult for a blind person than around their home town. More acute are the academic hurdles, but the RNIB's Braille library is reasonably extensive although limited circulation journals are obviously less readily available.

Lecture notes can be taken in Braille, or more often taped, and the RNIB even operates a service for transcribing exam questions into Braille.



## The academic obstacle course

### David Jobbins explains why the number of handicapped students has hardly improved

David Jobbins, a recent Essex University graduate, demonstrates the specially adapted Microwriter for taking lecture notes.

But Mr Richard Stowell, director of the National Bureau for Handicapped Students, says: "Although advisory committees have been set up to formulate policies, there are still problems in putting these policies into practice. This is particularly the case in universities where the admissions policy is dictated by the department rather than centrally."

Lord Boyle's demand for positive discrimination in admissions policies is dismissed by a minority among the disabled. Mr Stowell says: "Some will argue that there should be no positive discrimination because this will devalue the degree at the end of their course. But the vast majority would

argue there is a need to take account of handicap."

But the effect of some institutions moving far faster than others has led to another serious problem - that of "ghettoizing" of the handicapped. Universities which have shown the way, such as Leeds and Durham, not unnaturally attract successive generations of handicapped students.

Few people among those exceptional individuals who have fought for a place in higher education seek out the additional bother of "pioneering" at a college which lacks the expertise they need, particularly if they are severely disabled. There are also compelling practical reasons: not only with that expertise have been developed over the years but teaching aids and materials are almost certain to be readily available. There will be other students with common problems to discuss difficulties with and to learn from.

Despite these attractions there are good social and academic reasons why prospective students should not instinctively opt for such a choice. Mr Stowell said: "The ghetto approach limits the choice of degree. If as a blind student you are limited to half a dozen universities, it is hard luck if the course you want to take is somewhere else."

It is probably with blindness or impaired sight that the greatest steps have been taken. Each year, according to the Royal National Institute for the Blind, some 250 students in these categories enter higher or further education.

In the past 15 years, according to an RNIB survey, blind students have successfully studied at every university, 28 out of 31 polytechnics, 49 colleges of education or higher education, and 170 further education colleges.

Practical difficulties such as moving around the campus are no more difficult for a blind person than around their home town. More acute are the academic hurdles, but the RNIB's Braille library is reasonably extensive although limited circulation journals are obviously less readily available.

Lecture notes can be taken in Braille, or more often taped, and the RNIB even operates a service for transcribing exam questions into Braille.

But there is no reason to suppose that a blind student is at any serious disadvantage compared with his or her sighted counterparts. There is nothing a blind student wants less than to be treated as a tolerated exception and nothing he or she wants more than to be treated as a normal member of the community of which he or she forms a

part.

The classic image of the severely disabled student is the para-quadriga, a brilliant brain tied to a wobbly body in a wheelchair. While the blind or the deaf can lead independent lives, the most severely handicapped are the most demanding in terms of personal care and physical adaptation of buildings.

At Essex University purpose-built accommodation on the campus for the most severely disabled has been occupied by Ms Helen Aveling and Mr Andrew Keeling. Ms Aveling has cerebral palsy and Mr Keeling is a tetraplegic. They need 24-hour care and this has been supplied by three Community Service Volunteers.



## The academic obstacle course

### David Jobbins explains why the number of handicapped students has hardly improved

David Jobbins, a recent Essex University graduate, demonstrates the specially adapted Microwriter for taking lecture notes.

But Mr Richard Stowell, director of the National Bureau for Handicapped Students, says: "Although advisory committees have been set up to formulate policies, there are still problems in putting these policies into practice. This is particularly the case in universities where the admissions policy is dictated by the department rather than centrally."

Lord Boyle's demand for positive discrimination in admissions policies is dismissed by a minority among the disabled. Mr Stowell says: "Some will argue that there should be no positive discrimination because this will devalue the degree at the end of their course. But the vast majority would

argue there is a need to take account of handicap."

But the effect of some institutions moving far faster than others has led to another serious problem - that of "ghettoizing" of the handicapped. Universities which have shown the way, such as Leeds and Durham, not unnaturally attract successive generations of handicapped students.

Few people among those exceptional individuals who have fought for a place in higher education seek out the additional bother of "pioneering" at a college which lacks the expertise they need, particularly if they are severely disabled. There are also compelling practical reasons: not only with that expertise have been developed over the years but teaching aids and materials are almost certain to be readily available. There will be other students with common problems to discuss difficulties with and to learn from.

Despite these attractions there are good social and academic reasons why prospective students should not instinctively opt for such a choice. Mr Stowell said: "The ghetto approach limits the choice of degree. If as a blind student you are limited to half a dozen universities, it is hard luck if the course you want to take is somewhere else."

It is probably with blindness or impaired sight that the greatest steps have been taken. Each year, according to the Royal National Institute for the Blind, some 250 students in these categories enter higher or further education.

In the past 15 years, according to an RNIB survey, blind students have successfully studied at every university, 28 out of 31 polytechnics, 49 colleges of education or higher education, and 170 further education colleges.

Practical difficulties such as moving around the campus are no more difficult for a blind person than around their home town. More acute are the academic hurdles, but the RNIB's Braille library is reasonably extensive although limited circulation journals are obviously less readily available.

Lecture notes can be taken in Braille, or more often taped, and the RNIB even operates a service for transcribing exam questions into Braille.

But there is no reason to suppose that a blind student is at any serious disadvantage compared with his or her sighted counterparts. There is nothing a blind student wants less than to be treated as a tolerated exception and nothing he or she wants more than to be treated as a normal member of the community of which he or she forms a

part.

The classic image of the severely disabled student is the para-quadriga, a brilliant brain tied to a wobbly body in a wheelchair. While the blind or the deaf can lead independent lives, the most severely handicapped are the most demanding in terms of personal care and physical adaptation of buildings.

At Essex University purpose-built accommodation on the campus for the most severely disabled has been occupied by Ms Helen Aveling and Mr Andrew Keeling. Ms Aveling has cerebral palsy and Mr Keeling is a tetraplegic. They need 24-hour care and this has been supplied by three Community Service Volunteers.



## The academic obstacle course

### David Jobbins explains why the number of handicapped students has hardly improved

David Jobbins, a recent Essex University graduate, demonstrates the specially adapted Microwriter for taking lecture notes.

But Mr Richard Stowell, director of the National Bureau for Handicapped Students, says: "Although advisory committees have been set up to formulate policies, there are still problems in putting these policies into practice. This is particularly the case in universities where the admissions policy is dictated by the department rather than centrally."

Lord Boyle's demand for positive discrimination in admissions policies is dismissed by a minority among the disabled. Mr Stowell says: "Some will argue that there should be no positive discrimination because this will devalue the degree at the end of their course. But the vast majority would

argue there is a need to take account of handicap."

But the effect of some institutions moving far faster than others has led to another serious problem - that of "ghettoizing" of the handicapped. Universities which have shown the way, such as Leeds and Durham, not unnaturally attract successive generations of handicapped students.

Few people among those exceptional individuals who have fought for a place in higher education seek out the additional bother of "pioneering" at a college which lacks the expertise they need, particularly if they are severely disabled. There are also compelling practical reasons: not only with that expertise have been developed over the years but teaching aids and materials are almost certain to be readily available. There will be other students with common problems to discuss difficulties with and to learn from.

Despite these attractions there are good social and academic reasons why prospective students should not instinctively opt for such a choice. Mr Stowell said: "The ghetto approach limits the choice of degree. If as a blind student you are limited to half a dozen universities, it is hard luck if the course you want to take is somewhere else."

It is probably with blindness or impaired sight that the greatest steps have been taken. Each year, according to the Royal National Institute for the Blind, some 250 students in these categories enter higher or further education.

In the past 15 years, according to an RNIB survey, blind students have successfully studied at every university, 28 out of 31 polytechnics, 49 colleges of education or higher education, and 170 further education colleges.

Practical difficulties such as moving around the campus are no more difficult for a blind person than around their home town. More acute are the academic hurdles, but the RNIB's Braille library is reasonably extensive although limited circulation journals are obviously less readily available.

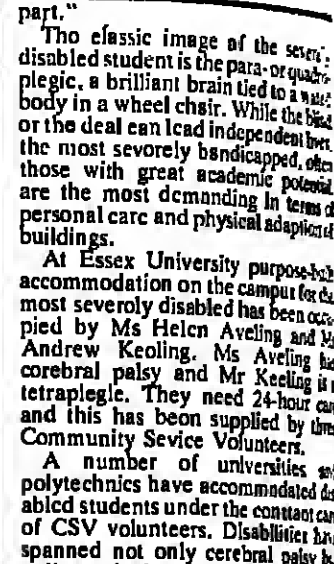
Lecture notes can be taken in Braille, or more often taped, and the RNIB even operates a service for transcribing exam questions into Braille.

But there is no reason to suppose that a blind student is at any serious disadvantage compared with his or her sighted counterparts. There is nothing a blind student wants less than to be treated as a tolerated exception and nothing he or she wants more than to be treated as a normal member of the community of which he or she forms a

part.

The classic image of the severely disabled student is the para-quadriga, a brilliant brain tied to a wobbly body in a wheelchair. While the blind or the deaf can lead independent lives, the most severely handicapped are the most demanding in terms of personal care and physical adaptation of buildings.

At Essex University purpose-built accommodation on the campus for the most severely disabled has been occupied by Ms Helen Aveling and Mr Andrew Keeling. Ms Aveling has cerebral palsy and Mr Keeling is a tetraplegic. They need 24-hour care and this has been supplied by three Community Service Volunteers.



## The academic obstacle course

### David Jobbins explains why the number of handicapped students has hardly improved

David Jobbins, a recent Essex University graduate, demonstrates the specially adapted Microwriter for taking lecture notes.

But Mr Richard Stowell, director of the National Bureau for Handicapped Students, says: "Although advisory committees have been set up to formulate policies, there are still problems in putting these policies into practice. This is particularly the case in universities where the admissions policy is dictated by the department rather than centrally."

Lord Boyle's demand for positive discrimination in admissions policies is dismissed by a minority among the disabled. Mr Stowell says: "Some will argue that there should be no positive discrimination because this will devalue the degree at the end of their course. But the vast majority would

argue there is a need to take account of handicap."

But the effect of some institutions moving far faster than others has led to another serious problem - that of "ghettoizing" of the handicapped. Universities which have shown the way, such as Leeds and Durham, not unnaturally attract successive generations of handicapped students.

Few people among those exceptional individuals who have fought for a place in higher education seek out the additional bother of "pioneering" at a college which lacks the expertise they need, particularly if they are severely disabled. There are also compelling practical reasons: not only with that expertise have been developed over the years but teaching aids and materials are almost certain to be readily available. There will be other students with common problems to discuss difficulties with and to learn from.

Despite these attractions there are good social and academic reasons why prospective students should not instinctively opt for such a choice. Mr Stowell said: "The ghetto approach limits the choice of degree. If as a blind student you are limited to half a dozen universities, it is hard luck if the course you want to take is somewhere else."

It is probably with blindness or impaired sight that the greatest steps have been taken. Each year, according to the Royal National Institute for the Blind, some 250 students in these categories enter higher or further education.

In the past 15 years, according to an RNIB survey, blind students have successfully studied at every university, 28 out of 31 polytechnics, 49 colleges of education or higher education, and 170 further education colleges.

Practical difficulties such as moving around the campus are no more difficult for a blind person than around their home town. More acute are the academic hurdles, but the RNIB's Braille library is reasonably extensive although limited circulation journals are obviously less readily available.

Lecture notes can be taken in Braille, or more often taped, and the RNIB even operates a service for transcribing exam questions into Braille.

But there is no reason to suppose that a blind student is at any serious disadvantage compared with his or her sighted counterparts. There is nothing a blind student wants less than to be treated as a tolerated exception and nothing he or she wants more than to be treated as a normal member of the community of which he or she forms a

part.

The classic image of the severely disabled student is the para-quadriga, a brilliant brain tied to a wobbly body in a wheelchair. While the blind or the deaf can lead independent lives, the most severely handicapped are the most demanding in terms of personal care and physical adaptation of buildings.

At Essex University purpose-built accommodation on the campus for the most severely disabled has been occupied by Ms Helen Aveling and Mr Andrew Keeling. Ms Aveling has cerebral palsy and Mr Keeling is a tetraplegic. They need 24-hour care and this has been supplied by three Community Service Volunteers.

John O'Leary on the final 10-volume version of the NAB plan to be published next week



Oxford Polytechnic student Colin Douglas (left) shows what he thinks of Christopher Ball (right) and the NAB plans.

## Four ways to spend

Even now the waiting is not over. Indeed, for many institutions the most crucial decision is still to be made by the committee at a final meeting next Monday.

That is when the local authority representatives will have to make up their minds about which of the four remaining options for distributing the cash underpinning their plan will be put in Sir Keith. It is a debate which has gone into extra time in each of the last four years and which will be repeated almost as soon as it is finished.

Given the relatively minor adjustments in student numbers proposed for most colleges and polytechnics, the choice of funding system has become the dominant issue for many administrators. The difference between one system and another can be as much as £1m on next year's budget in some polytechnics and would represent as big a shift proportionately in some of the colleges.

There was general surprise (even alarm to some quarters) when the NAB committee failed to reach a decision on the issue after three days of talks in Eastbourne and London. But the impasse appears to be more a matter of caution than a split in the ranks.

Members of the committee were concerned to see the effects of the new options before them on the smallest colleges. The latest of a long line of exemplification showing how each institution would fare under the different systems were rounded up to the nearest £100,000 and did not even include colleges or authorities receiving less than £50,000 from the advanced further-education pool. A set of figures for December 5 will go to much greater detail to ensure that the fate of the minnows is known, even if it is too big a fish which is likely to determine the outcome.

The four options still officially in play are:

● The formula method, Target student numbers are weighted according to the estimated cost of running courses in the different programmes. This was the method used to calculate the provisional budgets notified in the first version of the NAB plan.

It produces a shift of funds from the polytechnics to the colleges even when "moderation" is introduced. Changes in institutional budgets. The years ago we could have gone to people for money and they would have said that they were not interested. Now they are interested, they are beginning to come down.

There will be few surprises when the National Advisory Body publishes the 10 volumes of advice which constitute its plan for the polytechnics and colleges in 1984/85. The likely closures and mergers have been common knowledge for some time and campaigns are already under way in a number of institutions to persuade Sir Keith Joseph, Secretary of State for Education and Science, to show leniency when he gives his verdict on the plan.

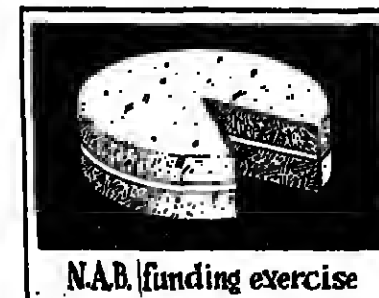
But there will be keen interest in comparing the treatment of institutions and courses, which has, up to now, been communicated only via the grapevine in most areas. And there may also be some surprise about the extent to which the plan has changed since the NAB Secretariat issued its own proposals three months ago.

In most respects the plan is close not only to the secretariat's recommendations but also to the institutions' own proposals during consultation. There are obvious exceptions, notably the colleges being forced to close or merge, but there remain large numbers of institutions and authorities which got almost precisely what they suggested at the beginning of the year.

However, there has been some important movement since August 26 and especially since Mr Peter Brooke, under secretary for higher education and chairman of the NAB committee, was able to come up with an additional £20m for the 1984/85 advanced further education pool. The changes - and indeed the thrust of the whole plan - are seen most clearly in the enrolment targets for first-year students, rather than total numbers.

Overall numbers in polytechnics and colleges were always bound to rise in 1984/85 unless a scale of cuts was imposed. Officials, not surprisingly, stressed from the outset that their plan was concerned with limiting expansion, not reducing numbers.

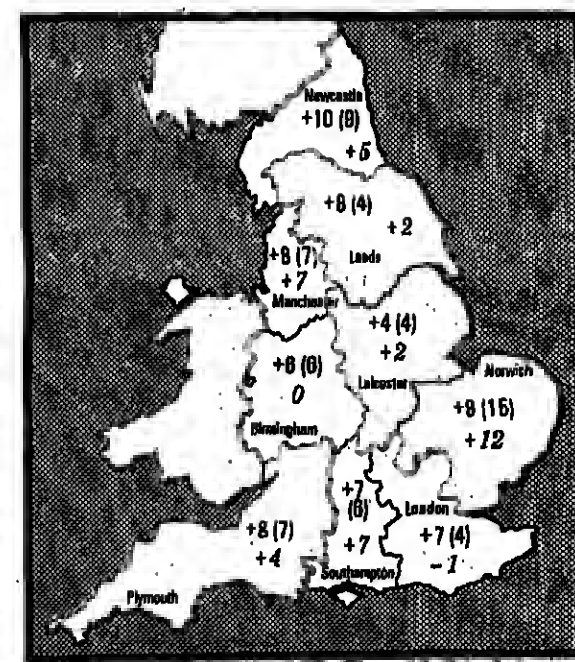
## A picture of targets not totals



But the first version of the plan, though setting targets significantly higher than those suggested by the sum of the institutional proposals, did represent a cut in first-year enrolments. If the policy was adopted and followed through in 1984 and 1985, therefore, the eventual result would have been substantially reduced numbers in the public sector. The national target was to be 83,600 new enrolments on full-time and sandwich courses, compared with 84,400 in 1982/83 and probably even more in the current year.

Thanks largely to the extra £20m, the picture is reversed in the final version of the plan, which allows for 86,100 first-year students on the same courses. When compared with the Institutions' own proposals for dealing with a 10 per cent cut, which added up to 80,200 new enrolments, the NAB claims to be protecting access look more impressive.

Nor has the controversy over funding levels reached the pitch which seemed inevitable when the first plan was issued. The issue may well come to the fore again when final decisions are announced on pool allocations, but, with approximately half the £20m going to shore up the unit of resource, fewer voices of complaint are being raised at present.



Percentage change in numbers. Figures in brackets are the percentage increases proposed in August. Italic numbers are first years.

Percentage change in numbers. Figures in brackets are the percentage increases proposed in August. Italic numbers are first years.

Percentage change in numbers. Figures in brackets are the percentage increases proposed in August. Italic numbers are first years.

Percentage change in numbers. Figures in brackets are the percentage increases proposed in August. Italic numbers are first years.

Percentage change in numbers. Figures in brackets are the percentage increases proposed in August. Italic numbers are first years.

Percentage change in numbers. Figures in brackets are the percentage increases proposed in August. Italic numbers are first years.

Percentage change in numbers. Figures in brackets are the percentage increases proposed in August. Italic numbers are first years.

Percentage change in numbers. Figures in brackets are the percentage increases proposed in August. Italic numbers are first years.

Percentage change in numbers. Figures in brackets are the percentage increases proposed in August. Italic numbers are first years.

Percentage change in numbers. Figures in brackets are the percentage increases proposed in August. Italic numbers are first years.

Percentage change in numbers. Figures in brackets are the percentage increases proposed in August. Italic numbers are first years.

Percentage change in numbers. Figures in brackets are the percentage increases proposed in August. Italic numbers are first years.

Percentage change in numbers. Figures in brackets are the percentage increases proposed in August. Italic numbers are first years.

Percentage change in numbers. Figures in brackets are the percentage increases proposed in August. Italic numbers are first years.

Percentage change in numbers. Figures in brackets are the percentage increases proposed in August. Italic numbers are first years.

Percentage change in numbers. Figures in brackets are the percentage increases proposed in August. Italic numbers are first years.

Percentage change in numbers. Figures in brackets are the percentage increases proposed in August. Italic numbers are first years.

Percentage change in numbers. Figures in brackets are the percentage increases proposed in August. Italic numbers are first years.

Percentage change in numbers. Figures in brackets are the percentage increases proposed in August. Italic numbers are first years.

Percentage change in numbers. Figures in brackets are the percentage increases proposed in August. Italic numbers are first years.

The movement has been in the opposite direction where part-time courses are concerned, although the major revision sought by the Department of Education and Science has not come about. The final target is below both that implied by institutional proposals and that set originally by the secretariat, but still allows for a 6 per cent increase in students.

Officials had their doubts about the realism of some of the colleges' proposals for part-time increases and had already reduced the 7.6 per cent expansion which would have taken place to 6.25 per cent. The eventual outcome may not be a dramatic fulfilment of the NAB's policy of promoting part-time opportunities but it should more than protect existing provision.

None of the proposals will be sent formally to Sir Keith until after next week's committee meeting, but the involvement of DES officials at every stage makes the actual date academic. Civil servants will have their advice to Sir Keith well formulated in the back of their minds, having sat through numerous reworkings of the arguments, so the deadline of less than a month to produce decisions on pool allocations should not be as tight as it might appear.

Indeed, it will be surprising if the NAB's advice is not accepted practically in toto. Mr Brooke is understood to have given the department's informal backing to the general shape of the plan after the board's residential meeting and has also chaired the committee meetings which gave the final go-ahead. But he and Sir Keith have made public their general satisfaction with NAB's performance during the exercise.

Nor should there be much doubt about the NAB surviving the review of its existence which must take place next year. There may be doubts among some of the consumers, but the body would seem set to pass its first official test.

Percentage changes

All students	First years
Initial teacher training	+5 (+5) -4
In-service, other education	+5 (+2) -3
Medicine, dentistry, other health	+7 (+8) -1
Engineering	+10 (+8) +15
Manufacture, other technology	+11 (+9) +10
Agriculture, forestry	+22 (+10) +13
Science	+10 (+10) +7
Mathematics and computing	+27 (+23) +47
Management and law	+5 (+5) +4
Social studies	+2 (-) -9
Other professions	+5 (+3) 0
Language (including English)	+3 (-) -5
Humanities	-2 (-4) -18
Visual and performing arts	+11 (+10) -4

(Figures in brackets are the percentage changes proposed by the NAB Secretariat in August.)

Mode of Study	1982-83	August plan	Final target
Full-time	182,600	184,000	197,500
Part-time	69,600	82,750	83,200
Total	242,200	266,750	280,700

Level of Study	1982/83	August plan	Final target
Degree and above	151,000	158,000	160,100
Sub-degree	91,200	98,750	100,200



per  
ay  
and  
he  
ins  
ls  
ins  
es-  
the  
nem  
(ed)



Professional writers depend, by definition, on their writing for a living. Academic writers do not. Hard-boiled, agent-orientated and ultra-conscious, the professional writer examines his contracts with querulous scepticism and fights for improvements, clause by clause. But academic writers, pleased, even flattered, by an offer of publication – the prerequisite of tenure and advancement – normally attach less importance to the commercial aspect of the transaction. The publication of a major work, the culmination of years of scholarly endeavour, is after all, its own reward.

The distinction between "professional" and "academic" writers is not always clear-cut in practice. Many dons are worldly-wise, media-sharp, and well versed in the difference between "spin-offs" and "serial rights". Not every academic is totally dedicated to those esoteric cul-de-sacs of learning where diving in the right direction is the sine qua non. As university presses and academic publishers hasten to diversify their lists, so academics are increasingly keen to contribute to lucrative series (Modern Masters, Past Masters, Postmasters?) whose main objective (one assumes) is to spare the student the trouble of reading the masters themselves.

Increasingly academic writers wonder whether they are receiving a fair remuneration for their books. Publishers, for their part, are beginning to abandon the traditional multi-rarian, you-shall-be-so-lucky attitude, demonstrating flexibility in negotiation and a willingness to modernize contracts. What they have so far stubbornly refused to do is to negotiate with the Writers' Guild and the Society of Authors a minimum terms agreement which would provide an effective and binding charter of rights for authors.

Contracts are not easy to read. As with the small print of insurance policies, one suspects that they are drafted to obfuscate the issue while stacking the cards in the publisher's favour. Nevertheless, every trade and profession generates its own specialized vocabulary, and authors have only themselves to blame if they make no effort to penetrate the jargon.

Negotiating on your own behalf with a publisher is not easy. Those who have seen *Educating Rita* may remember how the pill-popping professor invariably snatches up the telephone and pretends to talk "hig" to his

Author David Caute and publisher Gordon Graham take a look at the

## Contacts and contracts

publisher whenever his rival in love appears. Yet the publisher's business is business, yours is *From Chaucer to Conrad*. The fear persists that, if you make too many demands, require too many revisions of the contract, the genial voice from Bedford Square may suddenly grow cold and vanish in search of an alternative view of Chaucer or Conrad.

The average publisher's contract contains at least 21 clauses. One seizes on the advance payment, and the royalties offered, but beyond that one sees only procedures too self-evident to challenge or contingencies too remote to consider. The publisher has the initiative, the psychological advantage. He understands the ancient mysticisms of the incantation of his profession, euphoric at the prospect of patronage, most authors feel it would be morbid or misanthropic to sit down and ponder the real nature of the assault course that lies ahead.

There are two species of contract. One relates to a book already written and accepted; the other commissions a work wholly or partly unwritten. It is the commissioned work which tends to breed the greatest number of trials and tribulations for author and publisher.

Ideally one wants to write the book one wants to write, then submit it on completion (particularly true of academic writers, who don't really need £150 on signature of the contract to tide them through the coming year). This approach has the immense advantage that whoever finally accepts the finished work knows exactly what he's getting. No recriminations, no harrowing deadlines either. But few authors – other than absolute beginners – read content with this salutary advice. Many books are published as part of a series; subject, length and format have to be agreed in advance of the writing. Many editors, furthermore, feel more "creative" or involved if they have either proposed the subject or at least talked it through at an early stage; the editor then becomes the "father" of the book,

the author becomes the "mother". Finally, one must admit that authors don't always know what they want to write; they need an initial boost, a lift-off, if they are to avoid horrible bouts of anomic and idle despair during the months of writing. They need a deadline and a daddy at the end of it.

Although contracts are not formally divided in the following way, I believe it is useful to consider the clauses in two groupings:

A. What the publisher requires of the author;

B. What the publisher offers in return.

A1. The license to publish: copyright. According to pious belief, only rogue publishers demand your copyright and therefore acquire total commercial and moral possession of your text, without limitation. In practice a "respectable" publisher may demand your copyright (the literary equivalent of Virtue) if the book is to be part of an illustrated series destined to be packaged and marketed worldwide. Always refuse.

The civilized procedure is to grant the publisher a license to publish the work, in volume form, in a specified geographical area (ie world rights, or only UK rights) for a specified period of time. Invariably the publisher will wish to maintain his rights for the full period of copyright (ie until 50 years after the author's death). This is highly undesirable: a 10 or 15 year license would be offered instead.

A2. Delivering the manuscript. Obviously this is no problem if the book has already been written and accepted. But commissioned writers are required by contract to deliver the finished manuscript by a specific date. It's amazing how self-destructively irresponsible academic authors can be about this, signing up for several different books simultaneously, then settling down to reviewing, tutoring, lecturing, travelling, buying a house and having a baby – all with the most innocent disregard for their pledged deadlines. They positively collect con-

tracts like cigarette cards. But a contract is a time-bomb.

"Dear Nigel," Not having heard from you for the past eighteen months, I thought it might be useful to have news of *From Chaucer to Conrad*, which, as you know, is due for delivery at the end of next month. . . . Oh God! Not a word written! He can't be right! Surely I've got another year?

Many publishers offer in practice a period of grace, but their contracts tend to threaten non-publication and annulment of the contract in the event of late delivery. The point is this: if for any reason the publishers have developed cold feet about your book, then late delivery provides a contractual pretext for scrapping it. In a climate of recession, feel very cold indeed, lists are slashed, staff made redundant, cut, cut, cut. In addition, the publishers also demand, under contract, the return of whatever monies they have paid you on signature of the contract.

A3. Acceptance of the work. This sounds very nice until one considers the other side of the coin. rejection. This awful prospect is not fully spelled out in most contracts, but educational publishers in particular tend to claim the unilateral right to annul the contract if they do not – for whatever reason – wish to publish the finished product.

If this calamity befalls you, and you believe you have written a perfectly good book, according to specification, then adamantly refuse to return any monies and counterattack by demanding payment of the remainder of the advance. Bear in mind that if the original commissioning editor has subsequently quit the firm, that may very well be the hidden motive for rejection by his successors.

A4. Paying for illustrations: the index. The majority of contracts require the author to pay for illustrations, maps and copyright permissions. The best solution is to cross out the word "author" and substitute "publisher". A tough line on this is usually effective.

Getting the publisher to pay for the index is much harder, because he considers it part of the text. You must either compile the index yourself or prepare for a nasty deduction from your royalties if the publisher refuses to hire an indexer.

A5. Paying for proof corrections. This is what I would call a "free yawn in yell" clause. Hardly worth a glance when you're signing the contract, this clause evokes yell, howl, and yowls when a letter like this arrives:

"Now that your book is finished and has gone safely to press, I am writing you about the Author's Corrections bill. According to your contract, you should expect to receive a bill for the author's corrections above 5 per cent of the original cost of typesetting the whole work. The typesetting bill for your book was £1,650.83. We had a correction bill of £769.21 as a result of your corrections to the proofs, and must advise you that the sum of £881.62 will be deducted on your next royalty statement. In addition there will be a deduction of £91.00 in respect of the index."

"With kind regards . . ." This letter (I have slightly amended the figures to conceal its origin) was sent by a leading academic publisher. Why does this publisher compel its authors to pay for proof corrections? The excess of 5 per cent of the original typesetting cost, whereas the norm is in excess of 10 per cent?

Now for some heavy advice: (1) accept nothing less than the 10 per cent formula in the contract; (2) make sure that you read, check and approve the final, copy-edited typescript before it goes to the printer; (3) demand two copies of the proofs, transcribe your corrections on the spare set, and retain it.

Perhaps it would be useful if I put a word here about that unduly neglected and disdained process, copy-editing. Your own text may be replete with inconsistencies of usage: 34% here, thirty-six per cent there; the First World War here, World War I there; talk to here, talk with there. You may be hopelessly out of step with your style, your s's and z's realize or realize. Capital and abbreviations require two additional nightmares: *USSR* or *Soviet Union*? *US* or *USA*? Is the

## two sides of academic publishing

following correct: "Of all Western governments, the British government is the most . . ." Do we correctly speak of "queens" in general and "the queen" in particular?

Publishers may have a house style – a filter through which your text is passed. On they may not, in which case the copy editor is employed mainly to bring consistency to your prose, plus a few of his/her own prejudices. This higher business is no longer a joke; personal pronouns have become semantic dynamite. The NUS's *New Socialist Code of Practice for Book Publishers* warns editors that *statesmen* are *supervisors*, and *milken* are *milk deliverers*. The author should not only insist on having the last word, which in practical terms means checking the final, copy-edited text before it goes to the printer.

We now turn to Section B: What the publisher offers in return.

B1. When will the publisher publish? Good contracts say "within X months of acceptance of the manuscript." Bad contracts say nothing at all or take refuge in such vague phrases as "with due diligence" or "with reasonable promptitude". Naturally a 600-page masterpiece, with quotations in six languages and complex diagrams, may take longer to publish than a 20,000-word quickie swiftly marketed to suck the sad soul of literature's best lubricated tit. But do get the publisher to agree a time limit and to inscribe it in the contract. It's also very useful to oblige the publisher to accept your text within a specified number of weeks of receiving it – this is a universal source of aggravation and despair.

A general rule: publishers tend to adhere to the letter of the contract or hastily make amendments if it is pointed out to them that they have not.

B2. The advance payment. This is where you wake up, eh? Unfortunately I cannot say anything useful about sums of money, or what is a "reasonable" advance, since that depends entirely on the book and its potential sale. Some "academic" publishers offer no advance at all; they may not even offer a royalty on the first 500 copies sold. If you are tempted to accept, re-read Marx's comments on the *lumpenproletariat*.

An advance should be payable half

on signature, half on publication, in the case of a book already written and accepted. In the case of commission contracts, why not ask for a third on signature, a third on delivery, a third on publication? Better still – a half on signature, a half on delivery!

B3. Royalties. If a publisher does not offer royalty payments on a book of which you are sole or joint author, then have nothing to do with him. A royalty must be paid on every copy sold. It should not be less than 10 per cent of the retail price of a hardcover book (but some publishers argue that they cannot afford more than 7½ per cent in a time of acute recession). Royalty rates should escalate to 12½ and 15 per cent after a specified number of copies have been sold (say, 3,000 and 6,000 copies respectively). Be wary of, and inquisitive about, the notorious clause which seeks to reduce the royalty in the event of a "small" reprint. Why do some publishers define "small" as 500 copies, some as 1,000, some as 1,500, some as 2,000?

B4. Subsidiary rights. Good luck with the film and television rights of your forthcoming book, *Great Bores (or Bore-Holes) of the World*. More to the point, if you license your British publisher to market your book in America, and perhaps in translation as well, make sure that you receive your proper due from the sublicensing of local rights in an American or European/Foreign Language publisher. Most educational or academic publishers will attempt to retain a sizeably unreasonable high proportion of such earnings, and the absurdity of the system is confirmed by the anarchic plurality of terms offered. Don't accept less than 80 per cent of American and translation earnings.

B5. Paying the money. Royalty statements and accompanying payments should be made twice a year. Educational publishers, including the largest, tend to offer only annual statements and payments. There is no excuse for this, it is merely a device for drawing interest on your money.

B6. Free or complimentary copies. Demand twelve. Settle for ten. Don't accept the standard offer of six. American publishers always provide ten or a dozen. Ask for 20 copies of any



paperback edition.

(Never send free copies to close friends or colleagues in your chosen field. After all, who else would dream of buying your book?)

Finally, some general points. If you wish to possess the ideal contract from the author's point of view, as a source of enlightenment and reference, then you should join the Society of Authors or the Writers' Guild and acquire their joint minimum terms agreement. The practical problem is how to negotiate and argue with your publisher if you are not represented by an agent. Unless you are a lone brash and fully confident of your mastery of the jargon, it must be advisable to negotiate by letter.

Now for the Aunt Agatha. Here we transcend contractual cunning and aspire to true wisdom. A publisher's printed contract is not a reliable indica-

tor to his actual performance. He may not in practice implement his crueler, medicinal penalties. He may, despite his "bad" contract, sell more copies of your book, and distribute it more energetically to reviewers and booksellers, than another publisher offering a "good" contract.

A major publishing house is a fairly complex organism, divided into departments which handle editorial work, copyediting, design, the sale of rights, marketing, contracts, accounts, promotion and publicity. But the critical figure from the author's point of view is the editor, a single figure whose commitment to the book can be relied on. Make sure, at the outset, that you know who your editor will be; that they genuinely believe in your book, or project; that they are not on the verge of leaving the firm (a constant problem) or, dare I say it, of taking six

months' maternity/paternity leave? The ideal editor is above all a ferociously observant critic of the text. She (women predominate in this highly skilled but ill-paid vocation) will challenge every factual mistake, dubious argument, mixed metaphor, banal repetition, cliché and solecism, presenting you with a long list of queries and suggestions.

Better by far that you encourage your devoted editor to purge your text of blunders in a climate as confidential as the confessional, than that your hated rival Bloomsbury should expose you to ridicule in the review pages of *The Times*. Though he probably will, anyway.

The author was a member of the executive council of the Writers' Guild, 1976 to 1983.

## The Good, Bad and Ugly

Publishers, in common with academics and vicariously, tend to think by the year. If profits went down last year, it was a Bad Year, and this has to be a Recovery Year. If profits went up last year, it was a Good Year, and this has to be a Year of Consolidation, at least, or a Year of Further Progress, or best, Large Publishers make annual Business Plans. The largest ones make Five-Year Strategic Plans. Some small publishers fly by the seats of their pants, but even they are annualized by their tax returns.

The year of publication is one of a book's vital statistics, the others being the author's name, the title, the number of pages and the price. Last year's titles become "back list" which, like high-flying graduates or wine laid down, are supposed to become better with the passage of more years, but don't always. Back list titles which go into many printings are the main providers of publishers' profits and authors' royalties.

So, when a publisher says that it was a Good Year, he means two things. He had a good crop of new titles and his back list was selling well. On both counts, 1982 was a Bad Year for Britain's academic and professional publishers. Library funding fell again. (Everyone sees book-buying as a painless area for economy.) Textbooks remained low in students' purchasing priorities. Photocopying was getting out of hand. Piracy was eroding export markets. None of this was new. It all simply got worse.

This buffeting in the marketplace was aggravated by a self-inflicted wound. The year 1981 saw a dramatic and unprecedented fall in title output. In 1980 had about 16,000 titles and new academic disciplines. Librarians and booksellers had been buying for a long time that 100 many titles were published. Suddenly publishers seemed to have been hit by a self-inflicted wound. The 1981 total was about 14,000 and 1982's tally was still below the 1980 total.

But of course it was not sudden. Nothing in book publishing is sudden.

Publishers had signed fewer contracts in the recession years of the late 1970s. The gestation period from author contract to publication explains why publishers tend to have their recoveries – and their recoveries – after everyone else. Signing up more titles in a recession is like buying shares in a bear market, and publishers are no braver than other investors. Their overheads are jumping, their sales are not. So why tie money up in so many new titles? The thin harvest comes a few years later.

Not 1982 have fewer titles to sell. Fewer copies of each title were printed. The downward spiral theory of book publishing runs something like this. When the number of titles published grows faster than the sales revenue, fewer copies of each title are being sold; which means that fewer copies of the next comparable title will be printed; which means that the price of the next title will be correspondingly higher; which means that still fewer units will be sold; which means lower profits, because the publisher's fixed costs are amortized over the number of books he sells, not the number he prints.

A publisher's understandable reaction to this prospect is to refrain from publishing what he judges to be marginal titles. Any author who failed to get a scholarly monograph published title is. The odds against them are too heavy. Publishers, like punters, know the wisdom of their bets only after the fact. While all publishers live, each year, with their judgments of the previous year's British academic and professional publishers' judgments are more complex than others because their markets are diffuse and worldwide. There are about 70 significant UK academic and professional publishers; with annual turnovers ranging from below £100,000 into the tens of millions, and profits from 20 per cent of sales to losses of the same percentage. Total annual sales are about £200,000,000 – about one-fifth of the

total revenues of all British publishing. About half of the academic and professional sales are exports. The United States is the biggest export market. Europe, India, Japan and Australia are significant markets. In 1982, sales revenue went down in real terms overall and in actual money for some publishers. In the social sciences and medicine, revenues declined seriously.

These trends were worldwide. 1982 was also an unexciting year for the UK's principal competitor – the United States. But the Americans have vast home market. Sales of American academic and professional books in 1982 were nearly £1½ billion – a half times the sales of the UK. However, this was based on a title output little larger than that of the UK. There were about 19,000 US academic and professional titles published in 1981, on increase of 900 in 1980. In 1982, the number fell slightly. US publishers had also drawn in their horns – a little. But the US academic book market is not only much larger than that of the UK, it is more securely funded. Half of it consists of college textbooks, sold within one copy per student, and one copy per course. Sales of US college textbooks run into hundreds of thousands a year at prices British publishers can never match.

Although only about 15 per cent of US academic and professional books are exported, Britain is their second biggest market after Canada. The US market for British books is large, but it is not as large as the American market for British books. The UK market is too small to support its own academic and professional publishing industry. British publishers are rightly proud of their export achievements. Yet export depends on price, discounts, credit risk and travelling expenses all higher than in the home market, can be a mixed blessing. When exports are 70 per cent of total sales, as they do with many medical books, British books

## years in the precarious world of books

begin to resemble Swiss watches, their national identity being in their origin and not their use. Any larger UK houses have reduced their export dependence by becoming local publishers in their major export markets, for example, Australia, Asia, South Africa, Canada and, latterly, the United States. British-owned academic and professional publishing outside the UK may well total a further £100m of annual turnover.

During the 1950s and 1960s, US academic publishers established branches in the United Kingdom. During the 1970s, British publishers began to return the compliment and set up offices in the United States. The return of British academic publishing to the United States under US imprints, or not sold seriously at all. High student enrolments and generous library funding made the US a burgeoning market for the 1970s. Growth has levelled off, but the US is still an El Dorado of US professional publishing. Sales of US professional books, powered by lavish direct mail, reach remarkable totals by British standards.

The well-known defect of the whole British book market applies as much to academic and professional books as to novels. Book-use far exceeds book purchase. A university librarian would be unlikely to buy a new book unless it was a replacement for a lost one or a copy of a selected chapter of a certain textbook. The view, to lending the copies to students, is a dandy way of spreading knowledge, but not of sustaining a publishing industry, or encouraging authorship. The Publishers' Association has recently completed formation of the Publishers' Licensing Society in the hope of recovering fees for photocopying, but has had a gruff reception so far from the academic world. It would involve the cost of record-keeping as well as copyright payments.

British academic publishers feel embattled by photocopying. In the developed world, and by piracy in the developing world, the world in which the book is the only thing that could

propaganda, detection and a fighting find of several hundred thousand pounds. Publishers feel that anti-piracy is a struggle in which UK academics should also feel involved. The large export markets, cultivated over decades by assiduous and skilled British salesmen, have helped UK publishers to sustain a richness of output not enjoyed in, say, France or Sweden. Its publishers believe that the UK academic book should be seen, not as an aggravatingly expensive artefact poured out in willfully undisciplined numbers, but as a great and glorious institution to be nurtured for the sake of its authors, its readers and its ambassadorship around the world. There is no country where worthy scholarship has a better chance of publication.

The future of British academic publishing if going to depend on the virtuosity of its practitioners. There are no new markets to be uncovered. It is prudent to assume that unit sales per title will continue to decline. Whether they do this because of fragmentation of disciplines, restricted library funding, inter-lending, photocopying, piracy or electronic substitutes makes no difference to the publisher who sits down each day of his year to ponder the two questions that will keep him and what should he charge?

The least of the academic publishers' worries about the future is the one most publicized – that the book is going to be superseded by the computer and the terminal. The scholarly journal, both companion and competitor to the book, may have a degree of vulnerability, because it attempts the versatility which the computer is adept, but the book is secure as a vehicle for reflective, portable reading. Indeed, the new technology boldly used in the writing, editing and printing of books, will be of great help in combating the only real and serious threat to the book, which is the proposition that it is not an item of intellectual property. The unpaid work of the book is the only thing that could

kill it. Technology is beneficial. Only its misuse, as with the photocopier, is damaging.

The jargon of information technology tends to obscure the fact that the act of publishing is not changed by using a different vehicle. An academic or professional book is "a database". Its future depends on making it more "friendly to the user". One way to do this would be to speed up its abysmally slow production cycle, which the word processor is promising to do. In the future the author will set his own "type" and will be electronically on line to his editor. The Gutenbergian processes of sub-editing, typesetting and proof reading will be eliminated. Very short-run printing will become economical. Publishers are learning not to be deterred by a small demand, provided that they can recover their investments, pay their authors and cover their overheads. Thus technology is beginning to assist the publisher, although he needs the cooperation of his authors to reduce the time from seed to harvest.

Technological adaptation, making the book faster and cheaper, could be called the first pillar in the future prosperity of the book. There is no technical reason why the instant book should not be commonplace before the end of the century. Thus title output would not be reduced. But some of the books would not be placed in the warehouse. They would be "made to order".

It is fashionable to deprecate the number of titles published. (Every publisher knows that every other publisher is prone to over-production.) *The Bookeller* calls any increase in title output "unwelcome". Unwelcome to whom? Not to those who write and read. The only books unwelcome to publishers are unsold inventory. Title output is not only a response to need, but also, in hard times, what keeps publishing on an even keel. What kind of publishing industry would it be which has to tell an author that he has written an excellent and needed book, but that it cannot be

published? The publisher's job is to and ways to publish all worthwhile books. Only poorly written, irrelevant or duplicatory books should be unpublished, and this, too, is the publisher's job, as gatekeeper.

US management consultants recently analysed the success rate of wildcaters in the oil business. They sought to correlate those having the best geologists, the best equipment, etc with the success rate. They corresponded simply with those who drilled the most wells. Publishing is a little like this. The one-in-seven well that yields oil becomes the oilman's back list.

Publishers do not have much in the way of a collective consciousness. Their joint actions, through the very active University, College and Professional Publishers' Association of the Publishers' Association, tend to be defensive – photocopy licensing, lobbying for better library funding, taking pirates to court and so on. The tradition of competition makes their strategies individual. This means that their huge to their important constituents – teachers, scholars and librarians – is ill-defined. Publishers have a tendency to woo their authors ardently before contract and cherish them fondly after contract – until their manuscripts are delivered, and then to leave them in benign neglect. They have a tendency to talk with ivory tower teachers only when they seek endorsement of their textbooks. They have a tendency to regard librarians as adversaries rather than allies. The library relationship is also clouded by the scholarly, or learned, journal, to which the librarian feels manacled by the requirements of his constituents and of the prices of which he is critical.

If British academic and professional publishers were to get together in an endeavour to elevate their vision above the humps and valleys of Good Years and Bad Years, a consensus charter might look like this:

**AUTHORS:** We must attract good authors, satisfy their aspirations, monetary or other, and nurture our

relationship with them. **NUMBERS:** We must not be diverted by restricted numerical demand from publishing every worthwhile book. **SPEED:** We must reduce the interval between author contract and publication.

**COST:** We must use technology to reduce unit costs and consequently prices.

**MARKET:** We must concentrate effective marketing on the consumer in the UK and throughout the world, especially the United States. **PROTECTION:** We must continue to band together against copyright erosion by whatever means.

**LIBRARIES:** We must strive to reach an understanding of interdependence with librarians everywhere. **BOOKSELLERS:** We must engage the cooperation of booksellers everywhere as willing and adequately rewarded intermediaries.

**DATABASES:** We must be ready to get into the business of on-line services, collaborating with one another where appropriate.

**PROFITS:** We must satisfy our shareholders. Not one of the goals is easy. Not one of them is minor. Not one of them is dispensable. Some of them militate against others.

At the Frankfurt Book Fair in the second week of October 1983, the atmosphere was buoyant.

Walking down the miles of aisles, a first-time Frankfurt visitor asked: "How can there possibly be buyers for these thousands and thousands and thousands of new books?" To which a grizzled veteran of 27 Frankfurts replied: "There aren't. We lose money on every book we publish. But somehow, when we put them all together, we manage to make a little." "That's been true so far," persisted the neophyte, "but what about tomorrow?" "Tomorrow," said the veteran, slipping his seat reflectively, "tomorrow is another book".

The author is chief executive of Butterworth & Co.

مكتبة





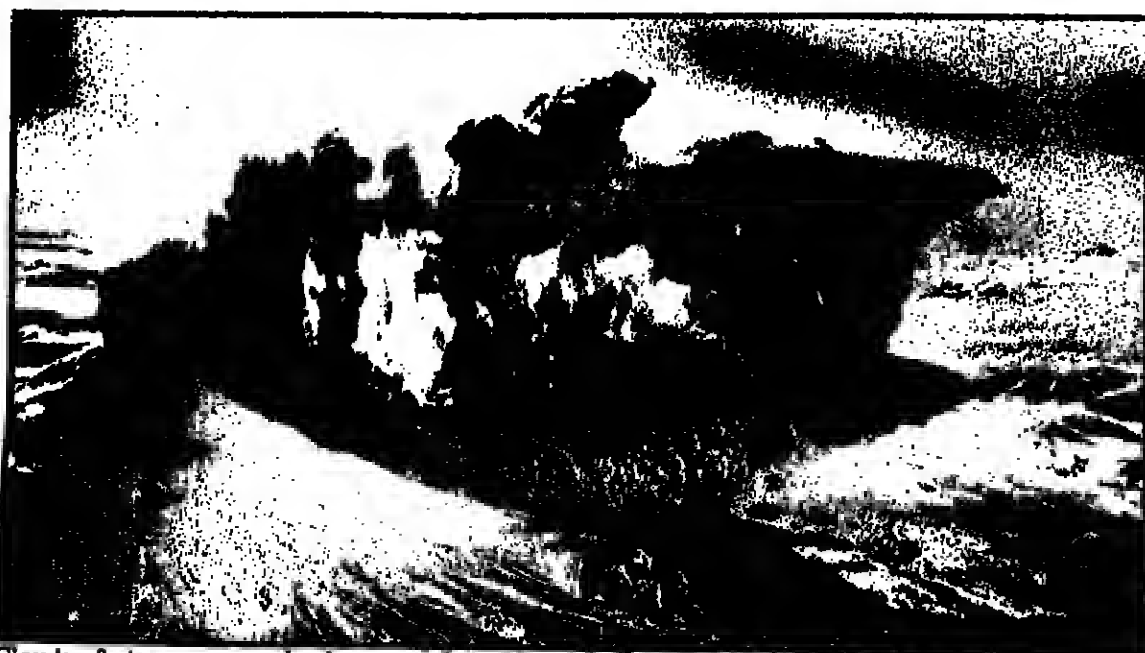
## A century since Krakatoa, H. H. Lamb examines the effects of volcanoes on the weather

News of the eruption of Mount St Helens in the state of Washington in 1980 and the devastating effects it caused, and of the actually much greater eruption of El Chichon in southern Mexico in March-April 1982, caught the imagination of a wide public. It has been suggested that these events will affect our climate for some years to come. The disasters by flood and drought and other extremes of weather that have affected particularly the third world in 1983 have lately caused an exceptional appeal by relief agencies such as Oxfam to governments and peoples in the better-off countries to rise to meet the extent of the emergency. Are these events connected?

This year is the hundredth anniversary of the great eruption of Krakatoa on an island in Sunda Strait in the East Indies on August 26/27 1883. Much of the island and its mountain, together with other, smaller islands in the strait, disappeared into the sky or fell back as "humps" into the sea. It is estimated that between six and 18 cubic kilometres of solid matter were blown up into the atmosphere. The column of finer debris, described as dust or ash, towered 27 kilometres high over the volcano. The city of Batavia, today's Jakarta, 160 kilometres away, despite its latitude near the equator, was in darkness for four to five hours around midday on the 27th. Ash falls were appreciable on islands up to 2,000 kilometres away, and the sound of the main explosion was heard in south Australia and Rodriguez Island, near Mauritius, up to 5,000 kilometres from the volcano. The dust veil in the stratosphere spread around the world within a few weeks and later spread over the whole earth.

By a lucky chance, regular instrument measurements of the strength of the direct radiation from the sun had been begun in that year at Montpelier in the south of France. (Such measurements are now made routinely at a wide network of observatories.) Some months after the eruption the strength of the solar beam showed a decline, and between 1884 and 1886 the deficiency at times amounted to 20

## Blowing hot and cold



Clouds of steam, gas and ash spewed from Mount St Helens when it erupted in 1980

to 30 per cent. The spread of the dust veil around the world made itself apparent also in unusually beautiful coloured sunsets and prolonged twilight; for the reduction of the direct solar beam is largely, though not entirely, compensated by an increase in the diffuse radiation from a large area of the sky around the sun.

The Royal Society in London nominated a committee of leading scientists in many fields to gather information and report on all aspects of the eruption and its effects. Among those effects was an apparent lowering of the surface temperatures, when averaged over much of the earth, by several tenths of a degree centigrade. The report which this august committee produced was published in 1888. No other eruption has ever been the

subject of such a comprehensive report.

Until the explosion of Mount Agung in Bali in 1963, the 1883 eruption remained the most thoroughly investigated case and no other eruption approached it for magnitude. It therefore stood as the classic example for nearly all writing on volcanic eruptions and climate. The Agung eruption presented the study using modern technology. Aircraft were used to capture samples of the volcanic material in the stratosphere for laboratory measurements of particle sizes, chemical analysis and so on. About the same epoch also, some useful understanding of how volcanic ash and aerosols spread in the stratosphere was gained from observation of the progress of trace elements after nuclear bomb tests.

This year is also the two-hundredth anniversary of another of the greatest eruptions known, that of Lake Iceland in May-June 1783, which produced the greatest volume of lava from any eruption anywhere in historical times. Estimates of the lava flow range from 12 to 27 cubic kilometres. In its now solid state, it may readily be seen by travellers from the airport to Reykjavik today. Generally, lava eruptions do not come into the question of possible effects on climate, because the bulk of the material never enters the atmosphere. But the 1783 Laki eruption produced a great output of ash and gases as well. Enough of it fell from the sky to destroy crops in Calhoun, in northern Scotland. And in June the sun was so dimmed even in southern France that it could not be seen until it was 17 degrees above the horizon. In Italy it was described as red and rayless. And in August 1783 there was another great eruption, of Asama in Japan.

These coincidences do not mean that volcanic activity recurs in a neat 100-year cycle. An even greater eruption, of Tambora, in the East Indies, in April 1815 disposes of that. On that occasion 150 cubic kilometres of rock went up in the explosion. And other great eruptions have not fitted the 100-year sequence. Nevertheless, great outbursts of eruptive activity seem to have marked the last two decades of the nineteenth and seventeenth centuries as well.

The 1783 and 1883 eruptions have been important milestones on our way to understanding of the subject. In 1784 Benjamin Franklin, who was then living in Paris as the first diplomatic representative of the new United States of America, wrote about the "constant dry fog" over all Europe and north of North America in the summer of 1783, weakening the sun's rays so that they would hardly kindle brown paper under a burning glass. He suggested that it was due to the Iceland volcano and might have so reduced the seasonal heating of the northern regions that the surface froze early in the ensuing autumn, which led on to a winter of exceptional severity. Franklin proposed that the occurrence of such severe winters should be examined for possible association with such volcanic activity.

Little could be done to follow up these suggestions before the publication

of the first long series of temperature records by W. Köpen for large areas of the northern hemisphere in 1873 and an improved series again in the *Meteorologische Zeitschrift* in 1914. A systematic list of great volcanic eruptions, with some numerical estimate of their magnitudes, was also needed. The first useful listing was produced by Karl Sapper in the *Zeitschrift für Vulkankunde* in 1917. With the lengthening series of measurements of the solar beam also then available, W. J. Humphreys, in his *Physics of the Air*, in 1920 could outline the effects of volcanic particles in the atmosphere on the earth's gain and loss of radiation. (Passage of the earth's outgoing long-wave radiation is much less impeded than the incoming solar radiation with its concentration in the shorter wavelengths.)

Soon, too, A. Defant demonstrated that there was a weakening of the gradients of average barometric pressure, and so of the mean wind circulation, over the north Atlantic in those years between 1880 and 1905 when great eruptions took place in the lower latitudes. In 1940, A. Wagner in Austria followed with the suggestion that the general warming of climates in the twentieth century, which lengthened the growing season and shifted floral and faunal boundaries, could be due to the prolonged lull in volcanic activity after 1912.

Other chronologies of volcanic eruptions have been worked out since, the more recent ones paying special attention to the extent and duration of the dust veil in the stratosphere. The latitude of the volcano is important here: stratospheric veils produced by eruptions in latitude within about 20° of the equator spread ultimately over the whole earth; those from volcanoes in high latitudes seem effectively confined to the middle and higher latitudes of the hemisphere concerned.

The latter arrangement may increase the overall equator-to-pole temperature contrast in that hemisphere and so provide increased energy for the winds, whereas a veil covering the whole earth – by weakening the heat supply to all latitudes – should weaken the temperature gradients and the wind circulation.

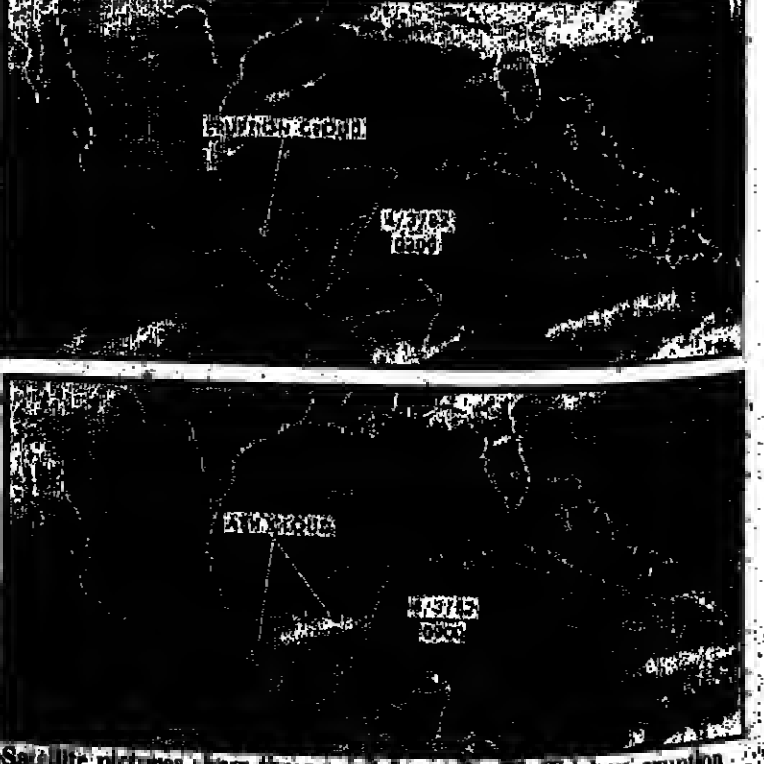
Various sorts of analysis of the stratospheric veils following eruptions in the last 20 years have revealed that it is not only the height reached by the "ash column" over an explosive eruption and the sizes of the particles in it that determine the duration of the veil. Besides the solid matter, gases and vapours are shot up into the stratosphere. Water vapour, carbon dioxide, and sulphur oxides are prominent in proportions differing from volcano to volcano and from case to case. The sulphuric acid contribution to the aerosol layer may be even more effective than the solid particles in intercepting solar radiation, and experience from the 1982 eruption of El Chichon shows that it may be diffused by circulations in the stratosphere to much greater heights than the initial ash column. The column above El Chichon reached about 17 kilometres, though within a few days observations of the stratospheric cloud over Hawaii indicated heights up to 30 kilometres. Months later laser and other techniques indicated aerosol at heights up to 39 kilometres, and the displays of luminous night clouds around that summer's solstice may mean that some water vapour from El Chichon has since reached the 80-kilometre level. This manifestly tends to prolong the "life" of the veil.

A recent study by Dr P. M. Kelly and C. Sears of the University of East Anglia of the sequels to four great eruptions in the last 100 years showed a significant lowering of northern hemisphere temperatures in the first 16 months after the eruption. And a similar study by P. Hendler of the University of Urbana, Illinois, of 10 great eruptions since 1809 found dramatic changes of sea surface temperatures in the Pacific – such as have occurred in extreme form this year – over the same average lapse of time. Moreover, this is an item regularly associated with changes in the wind circulation and weather over the whole globe. Many studies have now identified certain shifts of pattern (involving blocking or southward displacement of the westerlies) over the north Atlantic common in such cases.

It is important to extend our knowledge of the past history of the climate and of volcanic activity. If we are to put these studies on a firmer statistical basis, and to learn more about the difference that occur from case to case.

Closer study of the available temperature history curves makes it clear that not all the vagaries and trends of climate can be accounted for by the cooling effect of volcanic veils or the warming effect of our ever increasing output of carbon dioxide into the atmosphere from the burning of fossil fuels.

The author is emeritus professor and founder of the climate research unit at the University of East Anglia.



Satellite pictures show the spread from the El Chichon eruption

## BOOKS

### Too much scholarship

by Alan Ryan

*The Collected Papers of Bertrand Russell, volume one: Cambridge Essays 1898-99*  
edited by Kenneth Blackwell, et al  
Allen & Unwin, £48.00  
ISBN 0 04 920067 4

It is a moot question whether Bertrand Russell's reputation will ever again be as high as it was in the early 1950s. At that time, he was about as respectable a figure as he had been in his life – in 1949, his sovereign had given him the Order of Merit (though he had some what spoiled the effect by muttering "queer looking chap" to one of his aides at the investiture), the BBC had chosen him to give the first of the Reith Lectures, his sceptical, anti-communist rationalism stilled the postwar mood perfectly, and at the age of eighty he fulfilled the layman's ideal of what a philosopher ought to look and sound like. His numerous marriages, his avowed lack of religion, and his record of unsound opinions on sex, education, patriotism and much else only induced an agreeable frisson in those who thought intellectuals ought to be a bit daemonic.

By the time he died in 1970, the extravagance of his campaigns for nuclear disarmament, and against the American intervention in Vietnam had pretty well destroyed his reputation. This was largely the fault of those who surrounded him – and especially of his secretary Ralph Schoenman, whom Russell eventually and belatedly dismissed and publicly repudiated. Under Russell's name there came out a stream of denunciations of the United States as uniquely responsible for all the horrors of Vietnam and all identifiable threats to world peace, coupled with appeals to the Soviet Union to intervene in Vietnam and escalate the struggle against imperialism. This wouldn't have been so bad, had it not been coupled with an inability to keep off any topic which might discredit the US government – up to and including the assassination of John Kennedy.

For most of his life Russell was exceedingly unwilling to credit the undesired with moral virtues he probably didn't have; Russell thought that being persecuted made most people nastier rather than nicer. But in the final ten years of his life, what came out under his name claimed that the Viet Cong were peace-loving, almost entirely tolerant of the injuries done to them by American imperialism, and astonishingly scrupulous in their defence of their homeland. Again, Russell had always been entirely casual about racial matters – he loathed the racism of the American Deep South when he encountered it in the 1920s, but what he objected to about western imperialism was its pretension to erupt in wars which threatened the world. But now he was saying that the Vietnam war was essentially racist, a device for killing American blacks by setting them to fight Asians.

Not surprisingly, many people concluded that he'd either gone ga-ga and fallen for nonsense he would unerringly have identified as such a few years earlier, or had fallen into the hands of wild young men who were using him for their own purposes. Neither was calculated to make the world think well of him. The fact that he was undoubtedly right about how much more dangerous American foreign policy was than Russian foreign policy was lost sight of.

The Russell Archives – the vast collection of Russell's manuscripts, letters and other papers, which Moore University purchased in 1968 – were an artefact of the last years of Russell's life. Thinking of ways of raising funds for the Bertrand Russell Peace Foundation, Russell decided to publish his *Autobiography* and to sell off his papers. The *Autobiography* hardly ever reviewed at this point: all those how the work gets steadily less and less interesting, less and less intimate, less and less convincing as it goes on. On his life up to 1914, it is riveting; on his life after 1914, it is pretty thin; the final volume, which takes him from 1914 to 1967, is more or less worthless.

The Archives are a very different kettle of fish. Their usefulness to Russell's biographers is easily estimated by a look at Ronald Clark's *The Life of Bertrand Russell*. Where the material is not embargoed for one reason or another, it is indispensable – which is one reason why Clark is very readable on such personal matters as Russell's relations with Lady Ottoline Morrell, and why Jo Vellacott has written such a splendid book on Russell's work with the No-Conscription Fellowship. But Russell's second and third wives have quite reasonably refused to have their lives opened up for the same inspection, and Russell's activities in the nuclear disarmament movement are similarly kept under wraps. Clark is, in fact, very good on Russell's last years, but pretty thin on the thirty years between his marriage to Dora Black and his re-emergence in the vanguard of the anti-nuclear movement.

This, of course, would not matter if we were all absolutely convinced of Russell's standing as a philosopher, and if the Archive yielded tremendous insights into that side of his life's work. The curators of the Archive at McMaster University are convinced of Russell's genius, and are equally convinced that Russell's *Collected Papers* will disclose the secret of that genius. They propose to publish no fewer than 28 volumes – the first 10 volumes will be papers in philosophy, logic and mathematics, then his essays in politics, literature, history, and current affairs. All of which raises the dreadful question – do we need them, and what shall we learn from them?

My own view is that apart from real specialists, who are eager to know exactly how and when Russell changed his mind on particular issues, most readers will find that there's altogether more here than any reasonable person wants to read. Russell was not a great drafter. He explained to an American student in 1929 that by the time he set pen to paper – in fact, by then he was already dictating most of his work to a secretary – he had chewed over in his mind just what it was he wanted to say, and so could produce the finished item at the first draft. Nor was he much of a writer of material. Almost from the beginning, he was keen to use everything he wrote to the maximum advantage. He frequently reviewed the same book in three or four different journals; essays were slightly revamped for different audiences and different outlets. The collected papers, therefore, are going to contain an awful lot of stuff which is repetitive in itself, and which repeats what is already accessible to interested readers.

There is one area in which this is less true, and that is Russell's political writing from about 1900 to 1930; aside from the enormous amount he wrote during the First World War for *The Tribunal* – the journal of the No-Conscription Fellowship – there are articles from long dead journals like

*The Guildman* and the *English Review* in which he tackles such perennial issues as the possibility of workers' control in industry, the role of direct action in a democracy, the place of central government in a decentralised state, the expansion of educational opportunity in the postwar world, and the issues of war and peace which preoccupied him all his life. Since Russell could so easily have become the intellectual leader of British radicalism, these are well worth putting out in a permanent and more available form. For the rest, it's not clear to me that the Social Sciences and Humanities Research Council of Canada couldn't have done the world of scholarship far more good by subsidising the Bertrand Russell Archive in the production of a cheap bibliography of Russell's work, a detailed catalogue of his holdings, and the production of cut-price photocopies for those who needed them.

Still you might say that even if a job's not worth doing, it's none the less worth doing it well. This first volume is edited with enormous care; it contains Russell's adolescent diary, essays he wrote for the "crammer" he went to in Southgate before he went to Trinity, some graduate essays in ethics, papers he read to the apostles, and some he read to Russell's *Collected Papers* – the subject in which he got his Fellowship at Trinity in 1895 – and they are provided with 80 pages of "annotations" and 55 pages of textual notes. Morally admirable though such efforts are, the enterprise still seems intellectually misconceived.

Take one small example. The notes to item No 30, an essay on *Pleasure* that Russell wrote for Sidgwick in July 1893 – Russell took the moral sciences tripos after his BA in mathematics – contain the information that "Veronese" refers to Paolo Veronese (1528-1588), Venetian painter, and that "Simon Stylites" refers to "St Simeon Stylites (c.390-459), best known of the ascetics who lived on pillars". Wouldn't anyone who's interested enough in Russell to be reading his (not very exciting) first shots at ethical theory know who Veronese and St Simeon Stylites were already? And, if they didn't, is it the job of the editors of this volume to remedy the defects of their elementary education?

Of course, it's nice to have people mentioned in Russell's diaries identified for one – that "Mr Mahoney" is probably Captain Frederick H. Mahoney who joined in the inspection of the 1st Richmond Company of the Boys' Brigade in 1890 is just the sort of arcane information we do want. Even the editors don't know when to stop; Russell writes that he "took Rochat out on the Pond in Metrodora", and the editors solemnly tell us that Metrodora was "probably the name of a boat".

Forty-eight pounds is a lot of money to fork out for the supererogatory on a scale like this. All the same, it can't be



Bertrand Russell

denied that the contents have their charms. The adolescent diary, called "Greek Exercises" reveals a wholly recognizable Russell already. Russell was always a sentimental adolescent, and much of his zest for life seems to have come from an adolescent sense that what happened to him was more painful/pleasurable/significant than what happened to anyone else; like all adolescents he swung violently between despair at the present and equally unbridled optimism about the future – and that makes for a certain verve to his writings on almost any subject.

And he certainly could write; there is a splendid little piece called "Lob-borg or Hedda?" which Russell read to the Apostles in March 1894, in which he asks whether women should be admitted to the Society. It opens in character: "The subject of my paper has no connexion with its title, and it would be a waste of time to explain how I came to think that it had."

The subject is whether mutual sexual intercourse would overwhelm the Apostles' ability to discuss intellectual topics. With the liberal's usual confidence that talking about sex puts one off it, he declares "Of course, before electing any woman some member would have to promise that she was perfectly ready to discuss unnatural vice in case the subject should come up, and not merely to discuss it, but to discuss it in

a perfectly unartificial manner, without the feeling of doing anything unusual or perhaps a little naughty. And where this could be promised, I think one may safely say that freedom of discussion would be antagonistic to the beginnings of love."

Another paper for the Apostles, "Seems, Madam? Nay, It Is" is intellectually more interesting, as it is the first declaration of Russell's independence from the Hegelianism of McTaggart. Russell devotes his few pages to denying that there's any point in the philosopher trying to show that Reality is good when all we really know or care is that the world we live in is full of disagreeable phenomena. If God's in His heaven, all is not right with the world – we live in this world, not in His heaven, and all is not right with where we as matter of fact are. This seems to be the first time Russell stood up for a principle he later enunciated in objecting to Meinong's account of the "subsistence" of non-existent entities, like round squares or the Golden Mountain – that we should preserve our sense of reality in even the most abstract subjects.

I can't help feeling that the sponsors of this project ought to have paid more attention to that principle too.

Alan Ryan is a fellow of New College, Oxford.

### Nuclear debates

*Unholy Warfare: the church and the bomb*  
edited by David Martin and Peter Mullen  
Blackwell, £12.00 and £4.95  
ISBN 0 631 13453 0 and 13454 9

This anthology purports to carry further the debate about nuclear weapons into which the Church of England, a politically important constituency, was drawn by the unilateralist report *The Church and the Bomb*. This report recommended complete, phased British withdrawal from all involvement with nuclear weapons, combined with continued membership of NATO. General Synod rejected this proposal in favour of a compromise motion calling on NATO to adopt a policy of no first use of nuclear weapons.

Martin and Mullen coped with the issues so complex that a staid and palaeogeographical presentation of the whole argument seemed desirable. Their

chosen format is not promising: 24 short essays with the minimum of visible interconnection, and with some of the principal contributors (E. P. Thompson and Tony Benn, for example) neither noted for, nor displaying here any keen interest in, those issues which are peculiar to the debating of nuclear weapons by an established church in a nuclear-weapon state. The result is, not surprisingly, a ragbag which includes vigorously written brief polemics by great names including Enoch Powell and Lord Chalfont, pertinent contributions by undoubtedly relevant authors including the bishops of London and Salisbury, and intriguing material for an entirely different kind of inquiry, notably an essay by Bernice Martin on the popular culture of unilateralism.

Perhaps the most newsworthy feature of the book is the shift of position of the chairman of the group which produced *The Church and the Bomb*, having outlined five questions to which he thinks his group was right to direct attention, he says

the weakest point in the report was a failure to get to grips with the internal dynamics of NATO, and

with the need to modify the nuclear weapons policy of the alliance as a whole, not just that of one member state. Nothing has been said to change my personal conviction that an initiative by the West could usefully take the form of removing one nation from the world nuclear weapons line-up. But that result must be achieved by a different route from the one we suggested. (Pages 221-2)

It is a pity that the editors were not able to clarify this enigmatic statement by persuading the bishop to assess the detailed proposals contained in the essay in this volume by Dr Paul Rogers, since these aim to maximize the impact of British initiatives, which are presumably the prime concern of the Church of England. In the absence of such clarification, it is hard to know where the leading Anglican proponent of unilateral initiatives now stands in the debate.

On the compromise motion for a no-first-use declaration, the physicist Sir Nevill Martin presents a broad argument in favour, while some of the relevant considerations of the other side can be found in the essay by General Sir Hugh Beach, though not

presented as such. There seems to have been a remarkable lack of speeches by senior Anglicans in favour of no-first-use since the Syrod debate. One gets no insight from this volume into why this is so.

One of the most useful features of the volume is its making available the transcript of an important anti-unilateralist talk by Graham Leonard, Bishop of London. This and other multilateralist articles in the book concentrate on very generalized arguments in favour of a system that is deemed to have kept the peace for thirty-odd years. If one is to judge from this anthology then *The Church and the Bomb* has failed as an attempt to inform public debate about nuclear weapons, for the generalized polemics assembled here ignore almost completely the issues of proliferation and of the crisis in nuclear strategy and arms control which the earlier report singled out as crucial to any up-to-date discussion of the bomb.

Barrie Paskins

Dr Paskins is lecturer in war studies in King's College London.

### THE TIMES Concise Atlas of WORLD HISTORY



### A very Concise Offer

If you take out a year's subscription to the Times Higher Education Supplement, in addition to your 52 issues of the THES you will receive a copy of the International Best-selling Times Concise Atlas of World History (worth £12.50) absolutely free. This beautifully produced book containing over 300 dynamic maps has been described as "The best single volume of universal history available". Simply complete the coupon below and send it together with your cheque/P.O. for £25.00 (made payable to Times Newspapers Ltd) to the address shown.

Please note: offer applies to new subscribers in the U.K. only. Please send me a year's subscription to the Times Higher Education Supplement and my free copy of The Times Concise Atlas of World History. I enclose my cheque for £25.00 (made payable to Times Newspapers Ltd). Please send to:

NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_

SIGNATURE \_\_\_\_\_ Date \_\_\_\_\_  
Please send this coupon with your cheque to FRANCES GODDARD, The Times Higher Education Supplement, Priory House, St Johns Lane, London, EC1M 4BX.



## BOOKS

## A grand coalition

The City and the Grassroots  
by Manuel Castells  
Edward Arnold, £35.00  
ISBN 0 7131 6370 4

Manuel Castells's large book is a study of urban social movements, starting with the revolt of the Comunidades de Castilla in 1520, moving straight to the Paris Commune of 1871, the Glasgow rent strike of 1915 and a disturbance in Veracruz in 1922, before settling in to accounts of modern urban revolts in Paris, Madrid, cities in the United States, and squatter settlements in Latin America. It ends with an attempt to formulate a cross-cultural theory of urban change.

Castells has moved to the University of California, and his Gallic logic and positivism has become infused with American pragmatism and progressivism. Whether for this reason or not, the book is by turns irritating and enlightening. It is prolix, repetitive, and often woolly (the reader seeking a summary of his theory should consult pages 311-331), but his knowledge and insights make it desirable reading for all students of urbanism, and perhaps for the wider audience concerned with the crisis of modern society.

For Castells the city is the spatial representation of the social conflicts and contradictions caused by the power structure of society. His earlier books pioneered the study of urban conflicts and inequalities as a product of the capitalist system. His critique of the consequences of capitalism has in no way abated, but he now finds that Marxist theory is incapable of explaining the kinds of social transformation brought about by urban social movements. This is because such movements are not simply class conflicts, although they are partly that, but are also expressions of other types of protest (such as those of exploited women and ethnic minorities), and also deeply because they pit a counter-culture of cultural diversity and local autonomy against the specialization and deparsonalization of life caused by technocracy and the pursuit of profit.

On this view urban social movement is to be distinguished from a radical political party, because it seeks a basic change in social values and not simply a position for political bargaining. Castells points out that political parties have failed to absorb such movements as radical feminism, gay liberation, and ethnic minority rights. He might also have mentioned environmentalism and the peace movement, since his own evidence shows their relevance to the urban counter-culture in such matters as the protection of historic buildings and open space (instead of their absorption for profit), and in such symbols but suggestive actions as the declaration of nuclear-free zones by numerous municipalities.

Castells's prescriptions for a successful urban social movement are extremely demanding. He sees the paradigm movement as pursuing goals and facing adversaries on three planes: the demand for adequate collective consumption (housing, transport, and so on) and the control of land and property speculation; the creation of cultural variety and vitality and the enjoyment of local self-government; and the demand for local self-government. The respective adversaries are: the capitalist bourgeoisie (especially landowners and speculators), technocracy, and the state with its centralized bureaucracy.

These are difficult adversaries to take on simultaneously, and most of the urban movements that he chronicles ended in failure or limited gains. Thus the protest movements in the *grandes ensembles* of suburbanized state housing around Paris won some success over public services, but failed on the cultural and local governmental levels. The gay liberation movement in San Francisco succeeded in establishing its own way of life in one part of the city, but squeezed out some poorer workers and came into conflict with ethnic movements. His one success story is the urban revolt in Madrid, which on his account successfully pursued all three goals during and after

the end of the Franco regime; but here also some cracks appeared in the movement as some of its leaders were co-opted by political parties, and the present prospects of the movement are left uncertain.

Castells's theories are at odds with his evidence. Limited gains are often all that a grassroots social movement can hope to achieve, and they are often well worthwhile for the people concerned. To go further a specifically political movement is surely necessary, and it is here that one must doubt Castells's view that a social movement can successfully integrate forces which a political party cannot absorb. Some how Castells is hankering after the notion of a grand coalition of all those groups who are alienated and dispossessed by the forces of capitalism and centralized bureaucracy. Yet these groups too have conflicts of interest and varying degrees of involvement which are not just created, although they are certainly manipulated, by ruling circles. To be effective a counter-culture must eventually spawn a political programme capable of transcending the present dimensions of politics, and of being made operational — if only in the sense of delegating more power to the local level, and of initiating a sufficient transformation of the economy and technology to make this idea at all feasible.

## The means test

Reserved for the Poor: the means test in British social policy  
by Alan Deacon and Jonathan Bradshaw  
Marlin Robertson, £16.50 and £3.95  
ISBN 0 85320 435 4 and 436 2  
Change of Social Policy: the case of the supplementary benefit review  
by Carol Walker  
Bedford Square Press, £4.95  
ISBN 0 7199 1107 9

Much of the junk in the social security cupboard consists of means tests. These have been a convenient way of coping piecemeal with the various symptoms of poverty without dealing with the cause, and without spending "too much" money. By the 1970s, it was said, Britain was "a nation of means tests", not only as a basis for income maintenance and housing support, but also for a host of goods and services from a university education to hospital water bottles.

Alan Deacon and Jonathan Bradshaw have analysed the development of means tests from the bitterly resisted "transitional payments" of the 1930s to the present day. The reforms of the 1940s were intended drastically to minimize means tests, but were fatally flawed by decisions about the relation between insurance rates and national assistance scales. During the 1950s and 60s, the consensus for universal benefits crumbled in favour of "selectivity". It was in the early years of the Heath administration that a decisive shift towards means tests occurred.

The book goes on to analyse the problems of current means tests, especially low "take-up" and the "poverty trap", before reviewing a variety of alternative proposals. It concludes that a "clean sweep" reform of the tax and benefits structure offers the best long-term hope, but that none of the plans so far suggested looks like being practicable. The authors of this book have been among the leading contributors to the current orthodox view of means tests, of which this is an excellent presentation, and it is perhaps unfair, therefore, to criticize them for failing to question that orthodoxy. The standard treatment is at its weakest on the poverty trap. We are treated to the surprising spectacle of advocates for the poor suggesting to eliminate against the millions of low wage earners not suffering the full consequences of their lack of initiative and effort.

However obvious the problems associated with means tests (in the plural), there is a painful question to be faced about exactly who should be considered the prime beneficiaries of the social security system, if it is the poor, then high marginal rates of taxation or withdrawal of benefit are inevitable. If high rates of taxation are avoided, then most of the two thirds of the population with below average incomes might gain, but the poor

Nevertheless, Castells's demonstration of the force and vitality of local community movements in many urban settings will find a sympathetic audience among many people who might hesitate to accept his full diagnosis of the evils of capitalism. Moreover, it is true, as he says, that professional and middle-class groups are increasingly joining with working-class elements in urban politics. In these circumstances, it seems all the more curious and sinister that in Britain particularly (but also elsewhere), national governments are reducing the scope of local government, and in spite of the onslaught on quonges are transferring powers to business-like public boards. At the same time the restructuring of the economy to match the increasingly unstable conditions of international finance and trade heralds further far-reaching changes in urban structure, and new problems of insecurity and deprivation. Thus, these who disagree with Castells's diagnosis will have to explain why a counter-culture which seems increasingly to be desired is also being increasingly frustrated.

Castells ends his book on a note of pragmatic optimism that "notwithstanding the threatening storms of the current historical conflicts, humankind is on the edge of mastering its own future, and therefore of designing its

good city". This conclusion seems to rest upon the euphoria of some of the movements which he describes, rather than upon his own histories and analysis. This book would have been better for being shorter and more closely reasoned, but there is compensation in the author's empathy with urban movements which have often bravely flown the flag for humanist values against oppressive conditions, and which in a darkening world today may indeed represent some small beacons of light for the future.

Castells's treatment of urbanism is important for the reason that cities throughout history have been the breeding-ground for democratic and social reform, and spread out to a point where urbanism as a way of life is sometimes said to be dying. Castells rather convincingly refutes this hypothesis and shows that, however neutralized and anomic is outer suburbia, the inner areas of all cities and the shanty towns of third world cities remain the growing crisis points of modern societies.

Peter Self

Peter Self is attached to the Urban Research Unit at the Australian National University, Canberra.



A range of "Tide" and "Daz" packets with their precursors, a picture taken from Kenneth Hudson's book *The Archaeology of the Consumer Society* (Heinemann Educational, £12.50).

might become (relatively) even worse off than they are now.

At no time have hopes been raised higher for a genuine reconsideration of social security than in 1976, when David Ennals announced the supplementary benefits review as "the most searching analysis of the role of social assistance... since 1948". Carol Walker's obscurely-titled *Changing Social Policy* turns out to be not a general treatise on the welfare state, but strictly for social security buffs — a blow by blow account of false hopes and disappointment from this exercise in open government.

The review was unusual in that although it was carried out by DFSS officials, the report was published and a public response was encouraged. This alone was a development much to be welcomed, especially in view of the present almost secrecy surrounding every thought in civil servants' minds. But the report, and the period of debate, were fated to disappoint from the moment the excited rhetoric of its launch promised the review to achieve what would never attempt. First, people thought that the role of supplementary benefits in relation to other social security benefits would be subject to fundamental reappraisal. That would have meant opening the whole can of worms, and it is now clear that such a huge brief was never even considered.

Second, in a stunning example of the hegemony of economic and fiscal management over other policy fields, the Treasury had taken upon itself to censor the DHSS's thoughts before it had even thought them. It forbade the officials proposed not to consider any proposals which could increase the overall budget. This "nil-cost" restraint had effects beyond the obvious one of preventing an improvement in some or all of the harshest areas. The review team was some better policy by its inability to get from here to there without traditional costs; costs which they could not be borne by the government could only and unacceptably be borne by claimants.

As a result, the whole exercise has produced a "reformed" supplementary benefit scheme not very different in scale or method from its predecessor. Carol Walker, in *Change of Social Policy*, has

documented this process thoroughly, and at times fascinatingly. But, while it is true that the "nil-cost" problem pervaded every aspect of the review, it is perhaps a pity that it should also have returned on just about every page of the critique. Walker's only criterion for much of the analysis has been whether the amount of money available to claimants was increased. Since it was not, no points are awarded. But there were other issues, none of them as important as the level of benefit, of course, but some of them quite important all the same. The review did tackle some of these problems, though it remains to be seen whether it has solved them.

Richard Berthoud

Richard Berthoud is senior research fellow at the Policy Studies Institute.

## Rational choices

Racial and Ethnic Competitiveness  
by Michael Banton  
Cambridge University Press, £25.00  
and £8.95  
ISBN 0 521 25463 9 and 27475 3

We are used to books on race and ethnicity by Michael Banton which are both original and important. His latest offering is no exception. It is not original in the empirical sense, although because he draws on examples from numerous countries and historical periods it is an impressive work of synthesis. The volume's real importance, however, is in its use of theory to explain racial and ethnic relations.

Scholars of this subject are frequently accused either of abstracted research, or of inappropriately applying conventional social theories to racial phenomena. When applied to such contexts as South Africa and Northern Ireland, class-based theories, for example, prove less than adequate. White South African labour market policies are economically irrational and can only serve to weaken South

African capitalism at large and abroad. And class-based explanations of the communal conflict in Northern Ireland almost always seem contrived. Chapter five is devoted to a discussion of those social, psychological and economic theories which have been most frequently invoked to explain racial and ethnic conflict. As, in the satisfactory, he devotes the rest of the book to an analysis based on yet another theory, rational choice, whose central condition is a world made up of self-interested groups and individuals each intent on the maximization of social and economic benefits and the minimization of costs.

At first sight, Banton's devotion to rational choice analysis is brave indeed, for by so doing he is identifying himself with the public choice school of economists and political scientists, with all that this implies. But are free marketeers and race relations sociologists such strange bedfellows? In one sense they are not; liberal thinking specifically eschews differences based on race and ethnicity. To the economic liberal, the fewer artificial barriers to the free exchange of goods and services the better. So racism amounts to a distortion of the labour and housing markets and leads to sub-optimality. Reducing or removing discrimination is, therefore, equivalent to removing restrictive practices and monopoly. Only when they are treated as individual actors and economic actors each with complex and distinctive preferences, will discrimination in jobs, housing and education be eradicated.

It logically follows that competition between groups, rather than individuals, will strengthen racial and ethnic boundaries, and much of Banton's book is devoted to demonstrating and developing this theme. As with monopolists in the economic market place, dominant groups have a clear interest in remaining dominant but they achieve this through exploiting their racial and ethnic exclusivity, rather than by manipulating prices or restricting consumer choice.

Does this novel adaptation of rational choice and exchange theory work? To many respects it does. It enables the author to explain boundary maintenance between groups in South Africa, as well as the much more fluid and adaptive boundaries which characterize race relations in the United States. Because it is not historically or culturally specific, the theory has great strength. When, for example, Banton compares it with more conventional approaches to discrimination in housing in Britain and America, it appears to work very well. It can, above all, help to explain how individuals' preferences for different housing types interacts with discrimination to produce particular patterns of residential settlement.

What of the problems? Two major difficulties stand out. First, because the approach is selective and inclusive, Banton is able to make only very general claims to support the theory. Careful empirical research, preferably comparative across countries and historical periods, is needed before the true utility of the rational choice framework can be judged.

Second, and more seriously, the approach can be used to justify inequalities between individuals in market societies. If civil rights laws are effectively enforced, but inequalities effectively enforced, then this should reflect individual merit, not group or class success and failures. Yet we all know that the problems of subordinate racial and ethnic groups cannot be expressed or solved solely in individual terms. Banton recognizes this by accepting that "racial discrimination is threaded into the broader fabric of social inequality" and the analyses indicate that action against discrimination will be more effective if it is part of a general policy for regulating social inequalities. But which political principles should guide a general policy for these actively encouraged inequalities? Banton does not confront the obvious alternatives — a mixture of public policies which are both sensitive to the needs and preferences of individual members of racial and ethnic groups, and which can be coherently related to a broader programme of social and economic reform?

David McKay

David McKay is senior lecturer in government at the University of Essex.

BOOKS  
Saintly statistics

Saints and Society: the two worlds of western Christendom, 1000-1700  
by Donald Weinstein and Rudolph M. Bell  
University of Chicago Press, £20.00  
ISBN 0 226 89055 4

Say "computer" to a historian and he will probably start talking about census returns. Certainly it is a safe bet that his mind will not turn at once to prayer or miracle working.

*Saints and Society* is based on an exhaustive (so far as I can judge) sophisticated statistical analysis of the surviving materials for the lives of 864 saints who died between 1000 and 1700, and is, for that reason alone, a remarkable and original book. It is also well written and very readable; the statistical tables require concentration, but are not beyond the grasp of the innumerate (there is a comprehensive appendix on methods); and the authors consistently display a refined understanding of the nature and limitations of their often dubious sources, and a catholic command of the secondary literature.

For those who struggle, with Ranke, to see "the past as it actually was" saints' lives have little to offer. Even when they are contemporaneous they seldom amount to more than a salad of literary stereotype, conventional piety and the legend which is, almost by definition, inseparable from the saint both in life and in death.

But the qualities which make the saints' lives poor records of fact also make them a clear mirror of perception. It is this that Weinstein and Bell exploit, making a distinctive contribution to the long process of bringing these most voluminous and refractory of sources into systematic use simply by subjecting so much of them to a common examination. They offer a portrait not of what was, but of what was believed or expected or aspired to in those centuries, about the stages of human life (childhood, adolescence, maturity) in the first half of the book, and about society itself, in relation to place, class and men and women in the second.

It is an ambitious programme, and the result is sometimes disappointing, and sometimes banal. Some of the skillful but necessarily breathless outlining of the general historical background, for instance, might have been sacrificed to make it possible not only to say less than surprisingly, but also to probe its contexts rather more subtly to find out why. Nevertheless much of the detail, especially on the routines of everyday life and the conflicts of urban communities, is fascinating, and some of the conclusions are important.

Medievalists will find that the replacement in the thirteenth century of the saint of noble birth and high office by the saint of humble birth and lowly office, the curser of kings and manipulator of power, by humbler

figures of much more diverse social origin, which is much the greatest change in the pattern of sainthood in the whole period, illustrates and refines much that they have discussed in recent years. They may be less surprised by what others, like the authors, will see as the major assertion that, *pace* Aries, Stone and others, the "affective family" was by no means an invention of the eighteenth century. It is cogently demonstrated here that Europeans of the high middle ages had clear perceptions of both childhood and adolescence as distinct phases of personal development with their own qualities, character and problems, and that family love was both valued and assumed.

There is one example of the advantage which comes with the long chronological perspective adopted here. Most of the book's weaknesses, such as the inconclusiveness of the interesting discussion of why this perception should have faded away in the sixteenth century, to be replaced by much harsher attitudes towards women and children, also reflect the breadth and complexity of the task which Weinstein and Bell set themselves. Their success may be incomplete, but it is of considerable significance.

R. I. Moore

Dr Moore teaches history at the University of Sheffield.

## Primary sources

Alfred the Great: Asser's Life of King Alfred and other contemporary sources translated and with an introduction and notes by Simon Keynes and Michael Lapidge  
Penguin, £2.95  
ISBN 0 14 044409 2

Some of the greatest rewards of studying medieval history stem from contact with original sources — to read what a remote age set down, to learn something of their thoughts and attitudes and painstakingly to glean information about their society and activities from the written memorials they left behind them.

Thanks to this handsomely produced and inexpensive volume it will henceforth be easier for amateur as well as professional students of history to explore in such ways the written sources for the reign of King Alfred the Great. First, the book contains English translations of the biography of King Alfred written by his close associate Asser, together with annals from the Anglo-Saxon Chronicle for the years 888-900. These are followed by extracts from writings attributed to King Alfred himself and then by an absorbing selection of miscellaneous sources for the reign, including extracts from King Alfred's laws, a treaty made by him with the Danish leader Guthrum, the king's will and other materials which the most fascinating perhaps the least well-known places known as the Burghal Hidage).

All these texts are translated into clear and elegant English and they show better than any secondary description how surprisingly close we can get to the world of this ninth-century warrior-king and man of letters.

The translators, who are both noted specialists in the study of Anglo-Saxon England, have offered the reader a lucid introduction setting out the chronology and main developments of Alfred's reign and they have equipped their translations with truly monumental explanatory notes and commentary on the texts. This will make it possible for anyone with access to a large library to pursue further studies. Indeed it is this which will make this book an essential purchase for professionals as well as amateurs, for the notes and bibliography provide a very useful guide to recent scholarship on a wide range of aspects of Alfred's reign. As a bonus, the book offers an excellent series of maps (one of which very interestingly plots the distribution of lands referred to in Alfred's will) and two appendices dealing respectively with the story of King Alfred and the cakes and with the Alfred Jewel which forms the cover illustration. In short, this volume makes a real contribution to the accessibility of historical scholarship and is free from any tendency to peddle simplified, secondhand history.

There is, however, a danger in the very comprehensiveness of its treatment. It would be sad if readers were to conclude from it that Alfred and his age are now well understood. For, close as we can get to Alfred and his thought, there remain matters of fundamental importance which we have still to understand more fully — the origins of Alfred's belief in culture and religious revival, for example, and the possible links between his outlook and that of his continental contemporaries.

A detailed chronological survey is presented. Questions regarding Rufus's favourite oath on the face of Lucca and the succession to the Anglo-Norman possessions are pursued with an equal-handedness which sometimes obscures his argument, and if the bewildering tale of events creates a vivid impression of the treacherous



"Ribbon interlace" from the Book of Durrow, from Eva Wilson's *Early Medieval Designs* (British Museum Publications, £4.95).

clear and elegant English and they show better than any secondary description how surprisingly close we can get to the world of this ninth-century warrior-king and man of letters.

The translators, who are both noted specialists in the study of Anglo-Saxon England, have offered the reader a lucid introduction setting out the chronology and main developments of Alfred's reign and they have equipped their translations with truly monumental explanatory notes and commentary on the texts. This will make it possible for anyone with access to a large library to pursue further studies. Indeed it is this which will make this book an essential purchase for professionals as well as amateurs, for the notes and bibliography provide a very useful guide to recent scholarship on a wide range of aspects of Alfred's reign. As a bonus, the book offers an excellent series of maps (one of which very interestingly plots the distribution of lands referred to in Alfred's will) and two appendices dealing respectively with the story of King Alfred and the cakes and with the Alfred Jewel which forms the cover illustration. In short, this volume makes a real contribution to the accessibility of historical scholarship and is free from any tendency to peddle simplified, secondhand history.

There is, however, a danger in the very comprehensiveness of its treatment. It would be sad if readers were to conclude from it that Alfred and his age are now well understood. For, close as we can get to Alfred and his thought, there remain matters of fundamental importance which we have still to understand more fully — the origins of Alfred's belief in culture and religious revival, for example, and the possible links between his outlook and that of his continental contemporaries.

aries, the Carolingians. There is more to learn about the society over which he ruled and the economic basis underlying it — fields in which broader studies, certainly including archaeology, have much to contribute.

The reader should therefore see in *Alfred the Great* in effect a point of departure for exploring a remarkable and enigmatic period of history which deserves to be much better known.

D. W. Rollason

Dr Rollason is lecturer in history at the University of Durham.

## Medieval customs

Allen Merchants to England in the High Middle Ages  
by T. H. Lloyd  
Harvester Press, £8.95  
ISBN 0 312 01856 8

The *Carta Mercatoria* of 1303 introduced into England a relatively complicated system of customs duty. By it the privileges of alien merchants were guaranteed by the king in exchange for their paying customs, which varied according to the nature of the merchandise, and whether the goods were being imported, exported or re-exported.

Naturally a record of account was carefully compiled of this royal revenue, and some of the documents for the period when the tax was imposed are in the Public Records Office, London. These documents comprise

particulars of account, which for tax purposes showed the quantities, value and ownership of merchandise imported or exported by way of an individual port over a limited period — these were returns submitted to the exchequer. Secondly, the unrolled account provided the consolidated information compiled by the exchequer clerks from the returns.

Over the first three decades of the fourteenth century, however, governmental policy was not consistent, and between 1311 and 1322 the tax regulations concerning alien merchants were not enforced. Unfortunately now only a few documents of the particular account exist, and even the entolled account is not complete for the early period when the tax operated. Hence while the nature of the material has been known to scholars in the field at least since Griss's *Early English Customs System* of some sixty years ago, it has been generally held that the records did not provide the basis for a reliable picture of trade in the early fourteenth century.

Mr T. H. Lloyd, familiar with the customs records in consequence of his researches on the English wool trade in the middle ages, believes that their neglect for the period 1303 to 1336 is unjustified, as they throw light on the part played in English trade by alien merchants. In this book he makes it clear that he is fully aware of the difficulties and dangers inherent in the interpretation of the documents but he also displays an impeccable method of exposition.

Drawing on the customs' records Mr Lloyd furnishes eleven statistical tables. Here are indicated under each English port the weight, value and categories of goods imported and exported by aliens for every year, or portion of a year; there are gaps, of course, where there is no evidence. This information in its turn forms the basis of the author's consideration of the hinterland of each English port, and there the local economic picture is neatly dovetailed with the national circumstances. For London Mr Lloyd also draws upon documents relating to the alien assessments for tallage of 1304 and 1322. He goes on to examine four geographical regions of the continent from whence the goods imported by aliens originated and whither English merchandise was taken by them. So this record he it is noted that there is no consideration of the archival evidence of the continental ports, if any such material does indeed exist.

The study is the first detailed analysis of the part played by non-resident merchants in English trade in the early fourteenth century. It is judiciously argued and appears to be as far as one can go without further evidence. The work has an interest and significance broader than might be supposed; for instance, it has suggestive conclusions concerning the contribution made by Italian merchants as bankers in England which are in stark contrast to Professor Michael Postan's dismissive view. The volume is to be commended to all scholars interested in early fourteenth-century English and European history.

Cecil H. Clough

Dr Clough is reader in medieval history at the University of Liverpool.

BOOKS DISTRIBUTED BY  
MULTILINGUAL MATTERS LTD

Edited by Raymond V. Padilla

Vol I Bilingual Education and Public Policy in the United States

514 pages 1978 £8.90

Vol II Theory in Bilingual Education

440 pages 1980 £8.90

Vol III Bilingual Education Technology

497 pages 1981 £8.90

Edited by Gary D. Keller et al.

Bilingualism in the Bilingual and the Beyond

241 pages 1978 Hbk

£13.50 Pbk £7.95

Edited by Mark G. Garner

Community Languages

210 pages 1981 £8.90

By Michael G. Clyne

Multilingual Australia

188 pages 1982 £8.90

MULTILINGUAL MATTERS LTD

Bank House, 84 Hill Rd,

Newland, Avon BS21 7HH,

England.



## BOOKS

### Limits and borders

*King Lear, Macbeth, Indefinition, and Tragedy*  
by Stephen Booth  
Yale University Press, £15.00  
ISBN 0 300 02850 4

Stephen Booth tells us in his preface to this book that his wife strongly advised him to change its title, which seemed to her confusing and potentially misleading. It is not a neat title (and as is also admitted in the self-consciously disarming preface) it is not a neat book, consisting as it does of a long essay on *King Lear*, a somewhat shorter one on *Macbeth*, an "interlude" chapter on *Love's Labour's Lost* (one of the most interesting of recent essays on that play) and two appendices, one on "The Persistence of First Impressions (of plays)" and one on "Speculations on Doubling". All this material is given coherence by an over-riding concern with "indefiniteness" of various kinds: the failure to define and the fragile or arbitrary nature of limits and borders, inconclusiveness, inconsequentiality, incompleteness and problematic endings, and so on.

The essay on *Lear* comes first and is the most substantial. There is some excellent detailed analysis, especially of the last scene, and Booth is always at pains to avoid reduction, emphasizing that the many types of patterning and repetition in the play do not add up to reassuringly coherent meanings or morals but remain disturbing and inconclusive. Rejecting the popular tendency to take "Ripeness is all" as a one-line clue of the play, he suggests instead Gloucester's reply "And that's true too". Which is not to say that "anything goes" in the interpretation of literary texts but rather to pinpoint specific and significant overlapping, discontinuities and shifts of focus. Booth is particularly acute on moments when characters do not quite say what we think they ought to mean.

As the plot of *Lear* shocks us with its excessively harrowing ending, so the plot of *Love's Labour's Lost* can be said to be a more frivolous refusal to surprise us at least with its refusal of the normal comic ending. Booth demonstrates that even at this early stage in his career Shakespeare was interested in "indefiniteness" and the inconsequential. Talking some passages which many readers and players have found tedious or merely baffling, he moves through a lively discussion of the play's concern with numbers and with the word "goose" on his way to suggesting that (obscenities and all) the whole play could be described as a sustained pun on the word *egg*.

The following essay on *Macbeth* returns to the attempt to explore our assumptions about tragedy and user Aristotle as a sort of catalyst. Booth does not so much attack Aristotle as attempt to explain our obsession with him in terms of our reluctance to face the real issues.

The complexity, the logical disjunction, and, above all, the vagueness

of Aristotle's theory of tragedy make it the only one sure to provide busywork for the mind sufficient to forestall the always threatening occasion for moving on to the tragic actualities of reading or seeing a dramatic tragedy.

The argument advanced here is that the significant part of tragedy is not to do with the plot or the experience of the characters but rather with the experience of the audience in confronting what is nameless, indefinite and incomprehensible. This essay is more uneven since, despite its promising materials, it dwells for too long on familiar ground (the theme of equivocation, the problems of the scene set in the English court) and does not have the excitement and independence of

the *Lear* essay. In the appendices Booth offers some interesting speculations about doubling possibilities and their potential for thematic significance as well as a note on the problem of distinguishing between first and subsequent impressions of a play. The emphasis found here on the plays in the theatre is typical of the careful and sensible handling of detail throughout the book. It could indeed be matter for regret if prospective readers were put off by the awkwardness of the title.

Ann Thompson

Ann Thompson is senior lecturer in English at the University of Liverpool.

## A natural tory

Swift's Tory Politics  
by F. P. Lock  
Duckworth, £18.00  
ISBN 0 7156 1755 9

In the wider world, a Whig version of history may still rule. But in the academic study of early modern Britain, they have changed all that, and a Tory revisionism has led to a full-scale *renversement des alliances*.

A critical text here was J. P. Kenyon's *Revolution Principles* (1977) which saw the establishment of the Hanoverian regime as owing "nothing" to Whig principles and less to "Whig propaganda." Kenyon described "Whiggism on the defensive", brought to power by a series of chance events, and even then riven by internal dissent, lastingly a prey to "neurosis about the Revolution", uncertain about its own credentials for the hegemony it had achieved. At the same time, one can see in the work of a very different historian, E. P. Thompson, the glimmerings of an idea that Jacobitism was a populist cause, supported by the dispossessed in a corrupt oligarchy where "the allegiance of such men as Walpole... to the rhetoric of law was largely humbug" (*Whigs and Hunters*, 1975).

F. P. Lock has already given us a revisionist account of *The Politics of Gulliver's Travels* (1980), and his new book is equally challenging and intellectually bracing. He, too, sees a shift in ideological loyalties after 1714, whereby the abhorrence of arbitrary power, traditionally a Whig cry, "became naturally a Tory theme." There is a lot of "natural" around in Dr Lock's argument, and his final chapter, on "Swift's political values", suffers at times from this imputed clarity of cause and effect. "Swift was a natural Tory," we are told; he was "by temperament a conservative", linking the notions, "always a natural Tory, for he was by temperament authoritarian." Sunderland was, "like Swift, a temperamental extremist". In the final passage of the book, "By temperament and conviction he was conservative and authoritarian, an accident of history made him a patron and champion of liberty." The fundamental sense of Swift's character seems to me just, and certainly far more true to the reality than the apostle of compromise de-

scribed by critics like Kathleen Williams. Nevertheless, one would like more demonstration and less assertion. When Dr Lock declares that the term "old whig" meant in 1700 "almost neo-tory", again one senses a degree of facility in the course of argument which prompts this convenient elision. Earlier chapters on "The four last years" and "Swift and the Revolution" maintain a more convincing level of argumentation. The author has many excellent things to say about Swift's methods and strategies as a propagandist, for example the observation that "his rhetoric was commonly more moderate than the substance of his ideas." Again, Lock perceptively notes that Swift "becomes more outspoken as he gets his audience more firmly under his control." He shows how Swift's technique changes as the task moves from that of attacking the misdeeds of the Whigs to a defensive role in favour of the record of the Tory ministry, "to which his rhetorical gifts were much less well suited".

An important discussion of Swift's attitude to the 1688 Revolution raises more points than can be explored here. In brief, Lock argues that, despite serious reservations, Swift "always accepted the Revolution, if only from greater fear of the more destructive effects of a counter-revolution." More strikingly, he contends that "Swift was willing to sacrifice monarchy itself, to the interests of the church, which had been the real loser in the Revolution settlement." Some details of this densely marshalled case may be less than fully convincing, but it is a book which will grip all specialists, and should be read by anyone who wishes to see how changing perspectives on Augustan politics are affecting our sense of major writers of the time. After 1714 the Whigs became the natural party of government, and radicals, rebels or reactionaries could identify more easily with the displaced Tories. The implications for a man like Swift (an imaginative nonconformist, but an ideological loyalist) are explored in Dr Lock's absorbing study.

Pat Rogers

Pat Rogers is professor of English at the University of Bristol.

Carcanet Press has published at £4.95 *Selected Poems of George Meredith*, edited by Keith Hanley. The poems chosen were written over a period of sixty years, and are intended to show Meredith's gifts as a love and nature poet "of lasting significance".

## Taken from life

Characters of Joyce  
by David G. Wright  
Gill & Macmillan, £13.00  
ISBN 0 359 20424 2

"Characters in fiction walk off the page to meet us," says David Wright at the start of his book. "He goes on to illuminate the reality of Joyce's fictional characters by exemplifying biographical differences between them and Joyce, although he also pays some attention to the contributions of other members of his family."

It is taken for granted that there is general agreement as to what is meant by "character" - a rash assumption when dealing with a writer who, even as a youth, declared that a portrait in a work of literature should not be a "document" but "the wave of an emotion". Wright simply treats the work as a "document" and can be expected to produce a "biographical" study.

Nevertheless, in the case of Joyce, exposure of such similarities and differences can prove significant, as R. M. Adams demonstrated in *Surface and Symbol*. Unlike that book, however, *Characters of Joyce* has no new material to offer.

Wright's approach takes the form of examining the characters in the sequence of their appearances as versions of Joyce himself, although he stops short of suggesting that the Joyce spirit is a project of self-analysis. In pursuing this inquiry in relation to the artist as young man, he trends ground already well-trodden, albeit perfunctorily. Entering the more difficult terrain of the artist as husband and father, the author is paralyzed by his discretion which, if he insisted on retaining it, would leave where to stop. In this kind of analysis a recurring difficulty, he reflects, after querying Adam's "surprisingly unobjectionable observation that *Ulysses* Joyce endowed Bloom with his own traumas and obsessions. Wright's own speculations proceed no further than suggestions such as that perhaps Bloom's wedding day is excluded from his memories because his creator was barely married to Nora when he wrote

the book.

Attention to the connexion between Gabriel Conroy (in *The Dead*) and Joyce is devoted largely to his relationship with his mother, and it is mainly in Joyce's frank study of his own egoism that Richard Rowan (in *Estimates*) is examined. In the latter connexion, Joyce's heroism in "openly acknowledging" the faults he shared with his creation is alleged to attach itself. In the audience's eyes, to Rowan himself, Joyce, Wright concludes, "wanted to show that the world he envisaged in his books was, in fact, the real world." Beyond a routine exercise in "reasoning of consciousness", no attention is paid to the sense of character as a product of the writing, and the obstructive offered by the later styles employed in *Ulysses* is not considered as a sign that the reality of Joyce's world did not feature the type of character that Wright seems to believe in.

And that includes the character of Joyce.

Sydney Ball

Sydney Ball is author of *A Portrait of Joyce*.



Horace Walpole in the library at Strawberry Hill, by J. H. Mordaunt, taken from Brian Fothergill's *The Strawberry Hill Set: Horace Walpole and his circle* (Faber, £12.95).

## Speaking terms

Discourse Analysis: the sociolinguistic analysis of natural language  
by Michael Stubbs  
Blackwell, £19.50 and £8.50  
ISBN 0 631 10381 3 and 12763 1

Discourse analysis is a fuzzy area that has been studied within a variety of academic disciplines and has, as yet, no consistent theoretical framework. Surprisingly, perhaps, it has been relatively neglected by linguists; since it could not be analysed within the confines of a purely linguistic framework, it was considered to be outside their domain, as semantics once was. But just as it was absurd to omit from a model of language the fact that language has meaning, so it is absurd to omit the central character of language - that it is a system of communication.

Michael Stubbs's book is, therefore, a welcome introduction to the study of discourse, for it starts from perspective that is predominantly linguistic. And since almost all the illustrative material is drawn from informal, spontaneous conversations, recorded in real-life contexts, the book makes an important contribution to the analysis of natural language at the same time as it outlines some of the key ideas in discourse analysis.

As sociolinguist, Stubbs insists that the ultimate aim of linguistics must be the analysis of real language, rather than of idealized sentences that are figments of linguists' over-fertile imaginations; and his book presents pertinent criticisms of the data-based on which modern linguistics is founded and of many of the assumptions that linguists tend to take for granted.

One reason, of course, why linguists have preferred to analyse language from the comfort of their armchairs is that it is notoriously difficult to collect adequate samples of natural conversation. The final chapter of this book makes it quite clear that such an enterprise is possible, and gives useful practical advice on collecting data. It also provides a much-needed survey of some of the more theoretical implications of sociolinguistic research.

The main part of the book discusses the analytic techniques that are needed for the study of discourse, and the type of descriptive model that is required. Stubbs outlines three separate yet complementary approaches to the analysis of discourse, demonstrating the different insights that each approach can give. The first is the detailed study of transcribed conversation, which is used to show how speakers negotiate mutual understanding and how conversation is par-

terned. The second is based on ethnographic observation, in this case in classrooms, and is used to illustrate the functions served by different utterances. The third is a more conventional linguistic approach, showing how some adverbs, co-ordinating conjunctions and particles in English can only be explained by considering stretches of discourse longer than the sentence or clause.

A central question for a linguistic analysis of discourse is the extent to which the concepts that have been found useful in describing phonology and syntax can be carried over to discourse. Stubbs develops Sinclair and Coulthard's concept of the conversational exchange, and by doing so demonstrates that much of conversational discourse can be usefully analysed in terms of, for example, system and structure, and sequential and hierarchical organization. It is clearly shown, however, that much discourse cannot be handled in linguistic terms alone. Some can, perhaps (for example, our appreciation of the joke: "Yes I can. B. Can you see into the future? is dependent on our understanding of syntactic ellipsis and structural position), but the coherence of most conversations depends on a combination of linguistic, social and pragmatic factors which must be included within a complete theory of discourse. One section of the book partially illustrates this, discussing the different layers of organization that are present in discourse, from surface linguistic markers of cohesion to the abstract level of the speech act in context.

Many of the central concepts of discourse analysis seem obvious once they have been pointed out, though they prove to be difficult to define precisely. Not all are so obvious, though, and the book contains much that will interest the general reader. Our conversations are structured; we show our attitudes to our interlocutors by the unconscious patterning of our speech; indirectness has a social function without which communication would be impossible.

Of necessity in a book of this kind, much of the discussion is superficial. Several references are made to "theoretical claims over which discourse analysis is precariously suspended", yet we are given only the briefest of glimpses into these abysses. But this deficiency is compensated for by the wealth of bibliographic detail, this alone would make the book essential reading for those interested in the everyday life and/or the analysis of discourse.

Jenny Cheshire

Jenny Cheshire is lecturer in the department of applied linguistics at Birkbeck College, London.

## BOOKS

### COMPUTER SCIENCE

## There's glory for you

Alan Turing: the enigma  
by Andrew Hodges  
Burnett Books, £18.00  
ISBN 0 09 152130 0

Alan Turing did at least three remarkable things. As a young man he solved a famous set of formidable problems in mathematical logic; during World War II he was a giant in the talented team that broke Germany's main cipher system; and after the war he was the designer of one of Britain's first general purpose computers.

Andrew Hodges has written a wide-ranging book about this unusual man, using not only available documents but also the recollections of Turing's many friends and colleagues. He has produced a story of the man, of his work and the interaction between him, his colleagues and his times. Since for Turing interaction with people, particularly with people in authority, was difficult and sometimes bruising, readers may remember more about his disappointments than his triumphs. The triumphs, however, are there to be admired.

There is already one biography of Turing, written by his mother and unavoidably slighter than this. Hodges is far better placed than Mrs Turing was to be a research mathematician; he has had access to recent accounts of Turing's enormous achievements at Bletchley Park; and, as a member of the London Gay Liberation Front, he is willing and able to trace something of Turing's life as a homosexual. He has treated his material more or less chronologically, and interlarded with descriptions of his technical interests and research are accounts of his struggles with authority, of his friendships, of his general interests and his hobbies.

Hodges shows him growing from a sunny outgoing boy into a withdrawn and awkward adolescent. Determined as he was to reach his own conclusions and follow his own interests, he was often at odds with the world. He was imaginative, original, inquisitive, sceptical and eccentric: a delight to his friends, but to some people impossible to understand. By boyhood he enjoyed mathematics, chemistry, theoretical physics and astronomy; and he approached things with a "desert island" preference for doing things for himself from scratch; chemicals had to be boiled out of seawater, plants for a stellar globe that he started, he used only his own observations; and much of his mathematical work had the same rugged features. He had a searching curiosity that ranged over the sciences and philosophy as well as mathematics; and the work for which he will be remembered hovered uneasily between theory and practice. He could unquestionably have been a distinguished pure mathematician - he wrote a number of papers confirming this - but his tastes and his powers were better suited to the border country.

It was in 1935, the year of his election (at 23) to a fellowship at King's College, Cambridge, that Turing had his first outstanding success. Chaitin had shown that any useful finite automatic system contained propositions that could neither be proved true nor proved false; but the question remained whether or not there might be some algorithm, some mechanical method, whose application to any proposition would determine whether it was provable or not. Turing resolved the question by proving that there can be no such algorithm - and had the sad experience of finding that Alonzo Church had narrowly beaten him to it. But regardless of priorities, to most people Turing's methods were more important than the result.

He analysed the notion of a mechanical method, considering the mechanical compilation of an infinite sequence of decisions and ones which can be interpreted as the binary representation of a real number; and he showed that any such algorithm could be carried out by a particular sort of machine. Such a machine, now called a Turing machine, can read and write symbols in compartments on a tape of unlimited length; and it has a finite number of possible configurations, like the upper and lower case configurations of a typewriter. Its present configuration together with the symbol that it reads in the present compartment determine three actions: whether or not to change the symbol; what configuration to adopt next; and whether to move one compartment to the left or one to the right. The numbers that Turing machines can generate were called computable numbers; and, perhaps surprisingly for machines with such modest repertoires, all the numbers that arise naturally turn out to be computable.

Now a Turing machine is entirely defined by the table of instructions that orders, for each configuration and each symbol read, the three actions to be taken; and each such table can be coded by an integer. There can therefore be a Universal Turing machine that can compute any of the computable numbers; when the code-integer is fed in, it can decode it into a table of instructions, and can then carry them out. There is no difficulty about deciding whether a given integer is the code for some table of instructions; but not every table of instructions produces an endless sequence of symbols; it might define an "unsatisfactory" machine that just patterns about. Turing was able to prove that there can be no mechanical process for deciding whether a table of instructions is or is not "satisfactory", and he thereby settled the problem. Quite as important as the result was the concept of a universal machine that can carry out any required automatic computation when given the appropriate input. It is a concept that will be quickly recognized by anyone familiar with general purpose computers.



Alan Turing in 1951.

working, and Turing had not been involved in its design. His job was to organize the programs and the use of the machine. Fortunately that left him plenty of time for research, and he had long been interested by the way in which Fibonacci numbers appear in the configuration of pine-cones and other natural objects. He had also wondered how an embryo, which in its early stages forms an almost spherical, symmetrical mass of cells can develop, for instance, an axis for gas-transport, or any other feature that breaks the spherical symmetry - how symmetry can give rise to asymmetry. Hodges describes Turing's model of an embryo in some soup of chemicals; initially there is chemical homogeneity in stable equilibrium, but some change, perhaps of temperature, causes the equilibrium to become unstable. At that stage any random event may trigger events that lead to a patterned concentration of the chemicals round the embryo, just as a random event starts up an electrical oscillator. In each case the details of the event will have some effect (on the position of the pattern on the embryo or the phase of the oscillation) but the pattern itself and the frequency of the oscillation will be determined. By making drastic simplifying assumptions Turing could construct a model and play it on the computer. He managed to find parameters that indeed gave rise to patterns of concentration, and believed that he had the key to explaining gastrulation, polygonal symmetry (as in the starfish), leaf arrangements with the Fibonacci numbers, and other

things. Unfortunately he died before he could establish his model as more than a plausible mathematical suggestion. The book also describes Turing's wartime work in cryptology at Bletchley Park and Hanslope. His first and most dramatic work was on the German Enigma cipher machine. Nothing significant would have been achieved against it without machines, called Bombs, for the design of which he and Gordon Welchman were mainly responsible. Hodges gives a full account of the background, and of the many steps by which a Polish machine (of limited scope against Germany's wartime version of the Enigma) was developed into a powerful engine. One of Turing's most important and fascinating contributions flowed from the logician's theorem that any false proposition implies any other proposition. Hodges also gives some description of Turing's applications of Bayes' theorem and sequential analysis, which enabled the analysts to make economical use of the Bombs. War conditions made cooperation easier to achieve than he found later on, and Turing was able to build up and run a considerable organization, without the falling final of the administrators or the engineers. He was eventually moved from this work when it no longer called for his special talents, and was used as a general consultant and for liaison with the Americans; and towards the end of the war he was designing a speech secrecy machine at Hanslope. For this he seems to have had no direction and little support; but with help from one or two colleagues he built a reasonably compact pilot model, which came too late to attract official interest. His work, however, on Enigma was of crucial importance for the War; and perhaps no one else could have done it. At Bletchley Park, where he was the object of amused veneration, he probably enjoyed the most satisfying period of his life.

Hodges, throughout the book, tells us about Turing's private life. He describes a rather one-sided romantic friendship with a school-fellow who died at school, and the generous way in which the boy's family shared their benevolence with him. We read of his development after school into an over homosexual, and of his eventual arrest in 1952 on charges of indecency. He never regarded homosexuality as something to be ashamed of; and at his trial, although he admitted the charges, it was only with difficulty that he could be persuaded to plead guilty; Max Newman (professor of pure mathematics at Manchester) and Hugh Alexander (a wartime colleague) spoke of his value to the community and he was put on probation for a year.

Newman saw to it that his readership at the university was continued, and the Newman and many other friends supported him. Things seemed to have returned to normal when, in 1954, he poisoned himself; although Mrs Turing regarded his death as accidental, it seems almost certain that it was suicide.

The last chapter of the book covers the trial and his last two years, and, of course, examines the question why he killed himself. Hodges points out that at that time the security services were becoming particularly sensitive to the supposed danger of homosexuals having access to secret information. Turing had a lot of information that was still secret and he was a homosexual. Although the evidence is entirely circumstantial, the thought is implanted in the reader's mind that Turing may have been, as someone put it, "hounded to his death" by the security services.

Hodges is concerned to find patterns in Turing's life and perhaps on occasions imposes a pattern that does not quite fit. He pursues themes from children's literature, including *Alice Through the Looking Glass* and *The Wizard of Oz*. *The Wizard of Oz* is John von Neumann and Dorothy is Turing - which suggests a greater involvement of Turing with von Neumann than there was. *The Looking Glass* world stands, I think, both for the world as seen by a homosexual and for the irrational world we all know; Alice, the pawn, is Turing, the Red Queen is Russia, and so on. For my taste, this modern mythology is overdone; a hint of it might have sounded stimulating overtones, but there is too much of it for me.

There are gratifyingly many quotations from Turing. His published comments all make good reading, but it is his private unprepared remarks that particularly delight. He had a great knack of elucidating things by analogy, and of bringing a conversation suddenly to life with his own brand of explosive humour. Those of us who knew him will relish being reminded of him, and those who did not will enjoy this portrait of a complex and exceptionally gifted man. The book has a great deal to offer, clear technical descriptions set against their backgrounds; the story of a man largely at odds with the system he lived in; and the puzzle of Alan Turing himself.

Shaun Wylie

Shaun Wylie is an honorary fellow of Trinity Hall, Cambridge. He worked closely with Turing on the Naval Enigma project at Bletchley Park in 1941-1943.

## COMPUTING FROM CAMBRIDGE

### The Ada Companion Series

There is currently no better candidate for a coordinated, low-risk and synergistic approach to software development than the Ada programming language. This definitive new series aims to be the guide to the emerging industry for managers, implementors, software producers and users. Volumes on style and portability, language conversion, and Ada and multiprocessor systems are in preparation. The first volume to appear provides an appropriate life cycle model.

### Also from Cambridge:

#### Pascal Programming

A Beginner's Guide to Computers and Programming  
CHRIS HAWKESLEY

This lively introduction to programming using the Pascal language is equally suitable for self-tuition or class as a course text. The emphasis throughout is on the practical use of the most important programming concepts.

Hard covers £12.50 net  
Paperback £4.95 net

#### An Introduction to APL

S. POMMER  
Translated by BRONWEN REES

APL is distinguished by its concision and the power of its functions. This Introduction represents the cumulative experience of a team of experts and is written for all who wish to utilize themselves with this simple but extremely versatile language.

Hard covers £16.00 net  
Paperback £8.50 net

#### Fundamentals in Computer Vision

Edited by O. D. FAUGERAS

Papers by fifteen acknowledged experts which examine the theoretical concepts underpinning Computer Vision. Introduce the necessary analytical tools for Vision System design and address practical implementation issues related to hardware and software.

£20.00 net  
CREST Advanced Courses

#### Life Cycle Support in the Ada Environment

J. A. McDERMID and K. RIPKEN

on behalf of the Commission of the European Communities

This final report of the study of Integrated Ada Programming Support Environment conducted by SDL and TECSI Software in 1982 forms an essential introduction. Broad in scope and convincing in its detail, this report presents a detailed life-cycle model, discusses management philosophy compatible with that model, and gives an experimental assessment of individual methods (notably CORE and A-7).

£12.50 net

Publication 12 January 1984

#### Portability and Style in Ada

J. NISSEN and P. WALLIS

on behalf of the Commission of the European Communities

Publication February 1984 About £12.50 net

CAMBRIDGE UNIVERSITY PRESS







# BOOKS

## COMPUTER SCIENCE

### Classic algorithms

Data Structures and Algorithms  
by A. V. Aho, J. E. Hopcroft  
and J. D. Ullman  
Addison-Wesley, £13.95  
ISBN 0 201 10023 7

Algorithms  
by Robert Sedgewick  
Addison-Wesley, £13.95  
ISBN 0 201 106672 6

Just as the study of chromosomes and their constituents is the foundation of the life sciences and that of atoms and their constituents the basis of the physical sciences, so the study of algorithms and their representation lies at the heart of computer science. We are all familiar with the striking double helical form of the DNA molecule and it is well known that subatomic particles can possess charm, so it should come as no surprise that essential algorithms often exhibit a deep logical and structural beauty.

Like other fundamental entities algorithms are not quite the static objects which they may, at first sight, appear to be. For, when used to solve a particular problem, their symbolic behaviour may be subtly affected by the structure, volume and location of the data to which they are applied and by the idiosyncracies of the architectures of the devices on which they are executed.

Despite their primary importance, good books on algorithms have been scarce. Knuth's monumental attempt to produce a definitive and encyclopaedic treatment of the subject as it stood at the beginning of the last decade, a project that regrettably seems to have been at least temporarily abandoned - as difficult to find as black holes. It is therefore cause for celebration that two such worthy additions to the literature should appear almost simultaneously. Even more gratifying is the realization that these books need not be regarded as rivals but as a well-matched pair each of which enhances their mutual strengths while unobtrusively compensating for its partner's deficiencies.

The more sober of the two comes from the highly successful team of Aho, Hopcroft and Ullman - the source, in recent years and in various authoritative combinations, of a steady stream of successful texts that have proved such a boon to those engaged in undergraduate teaching. The traditional abstract data types, lists, queues, sets, trees and graphs are well described, a number of alternative representations and implementations of each being provided in terms of a slightly extended version of Pascal. Throughout, there is a commendable attempt to view data structures in isolation from the algorithms which process them, with considerations of storage economy and ease of maintenance and access influencing and guiding their implementations.

The algorithms discussed are chiefly concerned with sorting and searching techniques and with graph processing problems. The benefits of the use of abstract programming are emphasized and amply justified; there are excellent and well motivated introductions to complexity theory and algorithm design strategies, and the many exercises provide scope for further discussion and exploration. As with all multi-author works, the joins tend to show a little from time to time but overall this is a solid and respectable, if slightly passé, textbook which could profitably be used in support of a wide range of software courses.

Of the two, Sedgewick's book is therefore more readable and attractive, referring as it does in cast its net wide at the expense of detailed discussions of data representation and complexity analysis. As a result, it is possible to give a more catholic view of the subject than that provided by the other. For example, numerical algorithms are happily restored to their rightful place in the canon; the strong relationships which exist between many graph and computational geometric algorithms are highlighted; some trenchant remarks are made about the current possibility of implementing algorithms as machines; and there is an illuminating section on NP-completeness which points the way to difficult research problems. The material is invitingly arranged in 40 brief chapters under eight major headings. Again, Pascal is used as the implementation language.

But it is as a wonderful anthology of classic algorithms that the book makes its major impact. It is a glittering compendium of the many significant contributions made by some of the finest minds, anonymous, ancient and modern, to computer science in its widest interpretation. The book is beautifully produced and is illustrated throughout with pictures generated by some of the algorithms discussed. As

resting points in the text these drawings are at once intellectually bracing and visually soothing.

It is not difficult to foresee that this impressive book will be read and treasured years after much of the ephemera and dross which so disfigure and expose to ridicule contemporary computer science publishing has been long and mercifully forgotten.

Maurice Clint  
Maurice Clint is lecturer in computer science at the Queen's University of Belfast.

### Network design

Introduction to Local Area Computer Networks  
by K. C. E. Gee  
Macmillan, £6.50  
ISBN 0 333 34658 0

Principles of Computer Communication Network Design  
by J. Sedlar  
Ellis Horwood, Wiley, £37.50 and £12.95  
ISBN 0 85312 241 5 and 104 4

With the plethora of new books being published each month in subjects bordering on computer communications, it is pleasant to report that both these books will merit a place on my bookshelf. The first is a very readable account of local area networks - with no mathematical analysis and little emphasis on performance or software. The second is very mathematically based (as are most of the techniques required in computer communication design) - with no mention of any particular technologies.

Gee's book is mainly descriptive and contains chapters on the following themes: characteristics of local computer networks; data transmission technologies; software and hardware requirements; examples of local area networks; performance characteristics; and applications for local area networks. This material could form the basis for part of a data communications course, and would represent what I would teach to third-year undergraduates in six lectures.

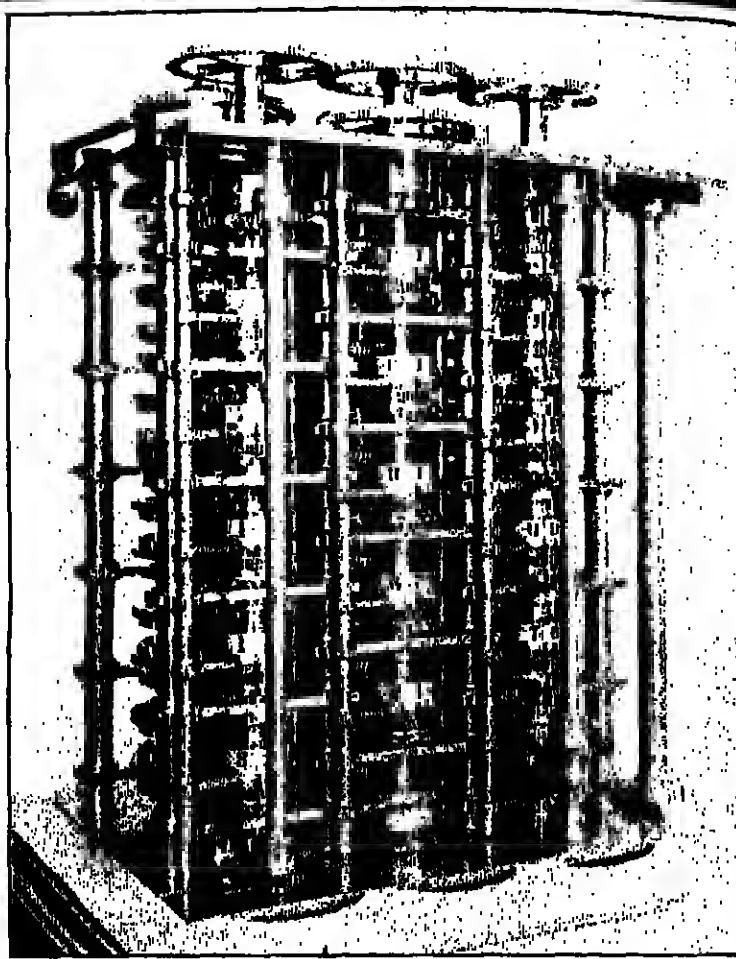
The book is particularly clear in its characterization of network technologies: it has a very useful discussion of data transmission technologies and of modes of network access, and a good account of the 1982 local network offerings by different manufacturers. It is very limited, however, in its coverage of software requirements or availability. Also, there is no real consideration of gateways between local area and wide area networks, and the treatment of performance issues is inadequate even for a text-lecture component on local area networks.

Although Gee's review of current systems is helpful, he provides much too little technical detail on the individual characteristics of the network he mentions. His discussion of applications is particularly poor: although he highlights "the electronic office" as an application area and mentions some of the services sent on telex, electronic mail and data bases, he dismisses each in two to three lines. "Flow control", "congestion control", "routing", "addressing", and "name servers" do not appear in the index.

The method of presentation used in the earlier chapters to explain simply the characteristics of the network he mentions, together with diagrams, is better. If you are considering the book for your course, I would suggest that you supplement it with fuller discussions of protocol structures, gateways, performance issues, reliability requirements, and applications.

Sedlar's book provides a deep and thorough analysis of mechanisms in computer communication networks, with chapters on fundamental concepts of problems in computer communication network design; open systems with a common channel; feedback systems with a common channel; common channel systems with coordinated mode operation; fundamental problems of routing; routing rules based on optimum flow; congestion and methods of "bombing" it; and organization of channel capacities and network technologies.

Although Sedlar has deliberately restricted his discussion of specific technologies, he does provide a very thorough account of fundamental principles of network design.



Charles Babbage's difference engine, an early calculating machine abandoned in 1833 through withdrawal of government funding. Taken from Christopher Evans's *The Making of the Micro: a history of the computer*, issued in paperback by Oxford University Press at £1.95.

"addressed to specialists in computer network design and to graduates and postgraduate students specializing in computer science", but my students would find its mathematical treatment demanding and difficult. Indeed, the mathematical treatment is so all-pervasive that only those specializing in theoretical aspects would get much out of it. They would, however, get a great deal: Sedlar's book would require forty lectures in areas like performance considerations, whereas Gee would require 30 minutes.

Most computer science undergraduates in Britain are so inadequately prepared in mathematical and statistical techniques that they would very quickly become lost in the book. If it can be used in an undergraduate course in Britain, I strongly suggest that there spend very much less of their time in practical work and very much more in theoretical analysis. (This is not to be taken as a criticism.) Courses here, however, last only three years and undergraduates must expect to spend a larger proportion of their time on computer software than on mathematical theory. Although we do have some advanced teaching on some MSc courses, none of these specialize in computer communications. We could really benefit, therefore, from the sort of in-depth treatment this book has to offer: the system in the United States, for example, with its two years of

postgraduate lectures, is a useful model.

As a teaching text in Britain, then, the book is limited. It does, however, have two main uses as an advanced text. First, those undergraduates who are given more than 50 hours of lectures on computer communications, would benefit greatly from its rigorous analysis of many topics. And, second, graduates from other subjects who wish to do research in computer communications would find this book a very useful guide on how to apply their talents. The book deals with all the important subject areas in network design, although its author seems to have considered only those techniques which do not make heavy computing demands. Also, there is no consideration given to simulation techniques, despite the obvious scope for application.

P. T. Kirstein  
Professor Kirstein is head of the department of computer science at University College London.

A second edition of R. F. W. Coates's *Modern Communication Systems* has been published by Macmillan at £16.00 and £7.95. A new chapter on the integrated services digital network has been added.

### STATISTICS: A SPECTATOR SPORT

Richard Jaeger University Of North Carolina, Greensboro

An invaluable work for people who need to understand statistics and utilise their results. This book is not a technical one and is not for people involved in statistical analysis. Its purpose is rather to teach the reader how to understand and apply statistics in the course of his work. Jaeger uses examples (but not equations) to illustrate his argument and to demonstrate how best to approach and understand statistical reports from all areas, including business and government, education and behavioural sciences. Most of the examples are from education, but people in all fields that involve the use of statistics will find this book of great value. Written with great clarity, this is a first-rate statistics book for the non-statistician.

December 1983 • 350 pages  
Cloth £21.75 • Paper £10.95

SAGE Publications • 25 Banner Street  
London EC1Y 0QE • Telephone: (01) 253-1516

# BOOKS

## COMPUTER SCIENCE

### Pascal guides

Pascal Programming: a beginner's guide to computers and programming  
by Chris Hawkesley  
Cambridge University Press, £12.50 and £4.95  
ISBN 0 521 25302 0 and 27292 0

Pascal for Science and Engineering  
by J. J. McCreger and A. H. Watt  
Pitman, £5.95  
ISBN 0 273 01889 2

Standard Pascal User Reference Manual  
by Doug Cooper  
Norton, £9.50  
ISBN 0 393 30121 4

Pascal is a very popular language and is now widely available on computers (the BBC Micro for example is soon to have a Pascal chip). Designed originally by Nicklaus Whirp, as a teaching language, it is relatively simple to learn and contains good control constructs and useful data structures. It lends itself to good program design: good Pascal programs are easy to modify and maintain - the commercial manager's dream. It is also relatively portable (compared with Fortran or Basic) and compiles into fast executable code.

Each of these three books has something new to offer. Hawkesley's book would be especially useful for beginners who are not scientific and

have no prior knowledge of computers. Its first chapters provide a gentle and very interesting introduction, in which the author is not afraid of introducing syntax diagrams. Worked examples and exercises are also provided.

The chapters on the teaching of the language itself, however, are not quite so thrilling. Some lectures are also irritating: the abundant use of single quotes might confuse the Pascal beginner; the "goto" statement appears even before comments; pointers are totally left out; and the function examples are rather too strongly mathematical. Nevertheless, the book should provide an excellent introduction for any computer novice.

McCreger and Watt's excellent book is again for total beginners in Pascal but is especially geared to science and engineering undergraduates. The first part provides a very thorough introduction to the language itself, with frequent and varied examples and exercises. An appealing feature is the abundance of practical hints dotted throughout the text - for example, how to arrange a "for" loop when effectively a "real" step value is required.

In the second part, Pascal is used to illustrate fundamental numerical analysis techniques for functions, differentiation, integration, ordinary differential equations and sets of linear equations. An informative chapter on character graphics and line graphs should appeal not only to users of computers with good graphics facilities but also to those with less specialized equipment. Finally, there is a chapter on date analysis, which includes an excellent description of Fourier transforms and other time series examples. The whole text is easy to read and to understand.

Although there are thousands of Pascal programmers, only a few are thoroughly knowledgeable about the language. ISO (International Standardization Organization) of the actual ISO standard is formal and strict: it is

no trivial task to find a particular piece of information and comprehend it. Cooper's reference manual should help, the rather formal title belching the informal yet informative vocabulary. This really is a treasure trove for anyone who wants to get to know standard Pascal.

The author first defines the notation and terms used in the standard - like "error" and "violation". After describing the ideas behind a particular construct, Cooper gives the Backus normal form (BNF) syntax, the syntax diagram, and clear examples, some legal and some illegal (clearly labelled as such). He is not afraid of exploring the "grey" areas - in fact he delights in it. In addition, he frequently relates the history behind the chosen ISO standard, explaining different points of view, advantages and disadvantages - all of which should provide readers with a better understanding of the difficulties of deciding upon a standard in the first place.

The general construction of the book is excellent - for example, there are frequent references to other parts of the text. However, I would have liked to have seen the "dangling else" problem better illustrated. Also, as conformant arrays are relatively unfamiliar to many readers, it would have been of value to have seen this and the remaining limitations on array manipulation thoroughly explored. The appendices on collected errors, BNF and syntax diagrams are most useful, but what is the point of having a six-page appendix "A Quick Introduction to Pascal" in a book mainly intended for existing Pascal programmers?

Despite these minor criticisms, I can recommend the book for its excellent contents and readability.

Gillian Lovegrove

Gillian Lovegrove is lecturer in computer studies at the University of Southampton.

### Becoming expert in Ada

Ada for Experienced Programmers  
by A. Nico Habermann and  
Dwayne E. Perry  
Addison-Wesley, £16.10  
ISBN 0 201 11481 X

One characteristic of the computing field at present is the wide variety of experience among its practitioners. There are many newcomers, who rapidly become experts in particular areas, and people who have a range of expertise acquired over many years, and all shades of knowledge between these extremes.

As a consequence, authors of books on computing have considerable difficulty in making reasonable assumptions about the prior knowledge of their readers, and (properly) tend to err on the cautious side. Reasonably experienced people consequently have to plough through a lot of introductory material before they reach the interesting substance. It was therefore a pleasure to read *Ada for Experienced Programmers*, a book about software engineering that explains clearly how the programming language provides the concepts and notations required for designing software.

By relating Ada to the ubiquitous programming language Pascal, Habermann and Perry indicate the level of experience they expect. They do not require the reader to be familiar in detail with that language; they assume that readers understand the concepts of programming, but introduce the notions of Pascal for the benefit of those who do not already know the language. This forms a well-defined platform on which to set the concepts of the Ada language, and has the incidental advantage that the discussions of Pascal could be used as an introduction to Pascal for programmers in other languages.

The style of the book is to take characteristic problems that occur in software design and discuss how they may be solved using the concepts of Pascal and Ada. This contrasts with the usual way of teaching programming languages, in which the concepts are treated one after the other. There is, however, a danger in the authors' approach, as certain features are likely to be omitted and the balance consequently affected. Habermann and Perry have substantially avoided this by their choice of problems. (The only deficiency I noticed was the absence of any discussion of Ada's "model numbers".) This leads to an excellent presentation of the language, with good guidance on linguistic style, and clear explanations on the many design choices that have been made.

After an introductory chapter dealing with the "conventional" features of Ada, there are nine chapters on the concepts of data abstraction and information hiding, followed by six chapters on an appendix about concurrent processing and low-level programming. Each chapter discusses issues raised by one problem, usually introducing one major topic directly and a number of others incidentally. This makes the book easy to read, but results in some rather surprising contingencies - for example, the discussion of separate compilation comes in the chapter on variant records, and exceptions are introduced in the chapter on array types. This rather random ordering in the presentation of topics makes the index an essential part of the book.

After presenting the problem to be considered in each chapter, the authors discuss the issues it raises and then develop a solution in Pascal (where possible) and solutions in Ada. Initially, these are similar to the Pascal solutions, but later chapters also show alternative designs, where Ada offers important improvements. The various design decisions are explained clearly in the text, and the complete programs in the text, and a set of exercises, followed by a list of reminders about points covered and a set of exercises. Within this framework, linguistic features are explained whenever they happen to arise in the solutions.

Problems have been well chosen to illustrate software design issues. Most are fairly traditional, but it is pleasing to note several with an "Ada twist". There are chapters on the handling of calendar dates, vector and matrix operations, matching character strings, complex and rational numbers, finding a zero of a smooth monotonic function, handling queues, tree-structures and sets. Classical problems are also used to illustrate the parallel programming features. Ada solutions are presented for the producer-consumer problem, readers and writers, dining philosophers and resource allocation. In addition there are chapters on device handlers (with a section on interrupt handlers in the

chapter on sets) and low level input and output.

Some issues raised by the problems are not covered, presumably because they would not add further to the understanding of the language. However, I find it disconcerting that string handling and tree handling were presented with no mention of garbage collection; also that inner products of vectors and zero-finding for continuous functions were discussed with only cursory mention of precision. Experienced programmers are certainly not assumed to be experienced numerical analysts.

Despite my criticisms, I can strongly recommend this book to serious programmers. Together with the practical use of an Ada system, it provides the ideal way of learning the language.

I. C. Pyle

I. C. Pyle is professor of computer science at the University of York.

Macmillan reference paperbacks have published the 1984 edition of *The Microcomputer Users Handbook*, a comprehensive guide to buying a business computer, by Denis Longley and Michael Shain - available at £16.95.

# Wiley

CHICHESTER NEW YORK  
BRISBANE TORONTO SINGAPORE

### ADVANCED PROGRAMMING: A Practical Course

by D.W. Barron, Computer Studies Group, University of Southampton, and J.M. Bishop, Computer Science Department, University of Warwick, Coventry, South Africa

A practical text which takes over where the elementary course leaves off, designed to give a solid grounding in programming with emphasis on systematic design, construction and the verification of programs. It describes two major programming languages which are designed to occupy the student for a whole semester. The book will serve as an excellent foundation for software engineering courses.

Wiley Series in Computing  
0471 80318 1 approx 280pp April '84 approx £10.75

### PROPER BASIC

by B.C. Walsh, Computer Laboratory, University of Liverpool

Designed to improve the reader's knowledge of BASIC while developing a deeper insight into computer and programming techniques, this book is an invaluable self-teaching guide for both beginners and experienced programmers. A common-sense, realistic, direct, and useful text available on a wide range of microcomputers are illustrated. 0471 80081 8 412pp November '83 £12.50

### PROGRAMMING IN BASIC (Video-tape Course plus Book)

by Ian Richmond, Edinburgh University and John Cookson, London Hospital Medical College

This course aims to teach people how to use BASIC safely and sensibly. The emphasis is on the construction of programs, with BASIC the language chosen to show how this should be done. The course consists of notes, the videotape series, and a book. PART 1: The Syntax of BASIC, Program Design, and Program Construction; PART 2: Introduction to BASIC in the BASIC Language; PART 3: Arithmetic Expressions; PART 4: Handling Character Data, The String Variable; PART 5: Ways of Using Repetition in BASIC Programs; PART 6: Subroutines; PART 7: Sorting Data. October '83 Video £28.95 Book £4.85 AVAILABLE IN VHS, BETAMAX & UMATIC - running time one and half hours

### USING BBC BASIC

by P.J. Cookson, University of Kent at Canterbury

This book aims to develop both skills in BBC BASIC and a more intimate knowledge of some of the special features on the BBC Microcomputer. Programs as well as text are presented in an easy and accessible style and the emphasis is very much on developing various techniques and skills by actually using the programs provided. 0471 80242 X 392pp November '83 £9.95

For further information please write to the Textbook Manager - Inspection copies of certain books available.

John Wiley & Sons Limited  
Baffins Lane, Chichester, Sussex PO19 1UD, England

### In-Depth Understanding

A Computer Model of Integrated Processing for Narrative Comprehension  
MICHAEL G. DYER

For computer scientists interested in the theory of memory representation, organisation and processing in computational models of language comprehension. The book describes the theory and its implementation in a computer programme called BORIS, which reads and answers questions about complex narrative texts. The system is unique in attempting to understand narratives involving emotions, using memory constructs called Thematic Abstraction Units to handle abstract themes. A micro-programme model and exercises are included as an appendix.

0-262-04073-5 480 pp. Harback £31.50

The MIT Press  
126 Buckingham Palace Road, London SW1W 9SD



## GEORGE'S COMPUTER BOOKSHOP

A bookshop dedicated to computer books and home computer software. One of the best selections of computer books (over 1,600 titles in stock) in the U.K. We aim to give an interested service to our customers in their quest for information on this rapidly expanding new technology.

We have many satisfied customers from all over the U.K. and overseas. Why not telephone or write to us. Contact Jean Young the manager of this specialised bookshop. Barclaycard and Access welcome.

87 Park Street, Bristol BS1 5PJ

Tel. 0272 276602 ask for Computer Bookshop







## Universities continued

**Messers University**  
Palmerton North, New Zealand  
**LECTURESHIP IN MICROBIAL GENETICS**

A position is available in the above department for a lecturer in Microbial Genetics. The position is full-time and involves teaching and research. The successful candidate will be responsible for the development of the microbiology programme. Applications should be sent to the Department of Microbiology, Palmerton North, New Zealand.

Salary: £22,501-£30,000

Further details of this position and of the University are available from the Department of Microbiology, Palmerton North, New Zealand. Applications should be sent to the Department of Microbiology, Palmerton North, New Zealand.

**University of Durham**  
Department of Engineering  
**RESEARCH ASSISTANT IN BIOENGINEERING**

Applications are invited for a research assistant in the Department of Engineering. The position is full-time and involves research in bioengineering. The successful candidate will be responsible for the development of the bioengineering programme. Applications should be sent to the Department of Engineering, University of Durham.

Initial salary will be in the range £13,100-£15,700 plus superannuation.

Applications (three copies) should be sent to the Department of Engineering, University of Durham. The successful candidate will be responsible for the development of the bioengineering programme.

**University of East Anglia**  
Norwich  
**TEMPORARY LECTURER IN ECONOMICS**

Applications are invited for a temporary lecturer in the Department of Economics. The position is full-time and involves teaching and research. The successful candidate will be responsible for the development of the economics programme. Applications should be sent to the Department of Economics, University of East Anglia.

**University of Oxford**  
**ASSISTANT REGISTRAR**

Applications are invited for an assistant registrar in the Department of Economics. The position is full-time and involves administrative work. The successful candidate will be responsible for the development of the economics programme. Applications should be sent to the Department of Economics, University of Oxford.

**University of Birmingham**  
Department of Engineering  
**LECTURESHIP IN MANUFACTURING TECHNOLOGY AND AUTOMATION**

Applications are invited for a lecturer in the Department of Engineering. The position is full-time and involves teaching and research. The successful candidate will be responsible for the development of the manufacturing technology and automation programme. Applications should be sent to the Department of Engineering, University of Birmingham.

Salary: £27,100-£34,100 plus superannuation

For further particulars please contact the Department of Engineering, University of Birmingham. Applications should be sent to the Department of Engineering, University of Birmingham.

**University of Otago**  
Dunedin, New Zealand  
**POSTDOCTORAL FELLOWSHIP**

Applications are invited for a postdoctoral fellowship in the Department of Engineering. The position is full-time and involves research. The successful candidate will be responsible for the development of the engineering programme. Applications should be sent to the Department of Engineering, University of Otago.

Awards may be made for one year or for three years.

Applications should be sent to the Department of Engineering, University of Otago. The successful candidate will be responsible for the development of the engineering programme.

**The University of Manchester**  
Department of Chemistry  
**LECTURER IN WEST EUROPEAN POLITICS**

Applications are invited for a lecturer in the Department of Chemistry. The position is full-time and involves teaching and research. The successful candidate will be responsible for the development of the west European politics programme. Applications should be sent to the Department of Chemistry, University of Manchester.

**The University of Oxford**  
**LECTURESHIP IN INORGANIC CHEMISTRY**

Applications are invited for a lecturer in the Department of Chemistry. The position is full-time and involves teaching and research. The successful candidate will be responsible for the development of the inorganic chemistry programme. Applications should be sent to the Department of Chemistry, University of Oxford.

**University of Oxford**  
In association with  
Brenson College  
**UNIVERSITY LECTURESHIP IN ORGANIC CHEMISTRY**

Applications are invited for a lecturer in the Department of Chemistry. The position is full-time and involves teaching and research. The successful candidate will be responsible for the development of the organic chemistry programme. Applications should be sent to the Department of Chemistry, University of Oxford.

**University of Oxford**  
**PROFESSORSHIP OF MECHANICAL ENGINEERING**

The position is full-time and involves teaching and research. The successful candidate will be responsible for the development of the mechanical engineering programme. Applications should be sent to the Department of Mechanical Engineering, University of Oxford.

Salary: £27,100-£34,100 plus superannuation

**University of Oxford**  
**PROFESSORSHIP OF PURE MATHEMATICS**

The position is full-time and involves teaching and research. The successful candidate will be responsible for the development of the pure mathematics programme. Applications should be sent to the Department of Pure Mathematics, University of Oxford.

Salary: £27,100-£34,100 plus superannuation

For further particulars please contact the Department of Pure Mathematics, University of Oxford. Applications should be sent to the Department of Pure Mathematics, University of Oxford.

**University of Oxford**  
**PROFESSORSHIP OF PURE MATHEMATICS**

The position is full-time and involves teaching and research. The successful candidate will be responsible for the development of the pure mathematics programme. Applications should be sent to the Department of Pure Mathematics, University of Oxford.

**University of Oxford**  
**PROFESSORSHIP OF PURE MATHEMATICS**

The position is full-time and involves teaching and research. The successful candidate will be responsible for the development of the pure mathematics programme. Applications should be sent to the Department of Pure Mathematics, University of Oxford.

**University of Nottingham**  
School of Education  
**LECTURESHIP IN PRIMARY EDUCATION**

Applications from men and women with appropriate qualifications and experience are invited for appointment to a lecturer in primary education. The position is full-time and involves teaching and research. The successful candidate will be responsible for the development of the primary education programme. Applications should be sent to the School of Education, University of Nottingham.

**University of Oxford**  
**WAYFLEET PROFESSORSHIP OF PURE MATHEMATICS**

The position is full-time and involves teaching and research. The successful candidate will be responsible for the development of the pure mathematics programme. Applications should be sent to the Department of Pure Mathematics, University of Oxford.

Salary: £27,100-£34,100 plus superannuation

**University of Oxford**  
**WAYFLEET PROFESSORSHIP OF PURE MATHEMATICS**

The position is full-time and involves teaching and research. The successful candidate will be responsible for the development of the pure mathematics programme. Applications should be sent to the Department of Pure Mathematics, University of Oxford.

Salary: £27,100-£34,100 plus superannuation

For further particulars please contact the Department of Pure Mathematics, University of Oxford. Applications should be sent to the Department of Pure Mathematics, University of Oxford.

**University of Oxford**  
**WAYFLEET PROFESSORSHIP OF PURE MATHEMATICS**

The position is full-time and involves teaching and research. The successful candidate will be responsible for the development of the pure mathematics programme. Applications should be sent to the Department of Pure Mathematics, University of Oxford.

**University of Oxford**  
**WAYFLEET PROFESSORSHIP OF PURE MATHEMATICS**

The position is full-time and involves teaching and research. The successful candidate will be responsible for the development of the pure mathematics programme. Applications should be sent to the Department of Pure Mathematics, University of Oxford.



**Buckingham College of Higher Education**  
School of Art and Design  
Furniture and Timber  
**Director of Studies, Art and Design Principal lecturer**

to take charge of three dimensional design honours degree courses in Furniture Design, Interior Design, Ceramics with Glass, Silver Metalwork, the MA Course in Furniture Design and Technology and Foundation Art Course.

This is an important appointment and applicants should be well experienced in the three dimensional design area. The post will become vacant on the 1st January, 1984 or as soon as possible afterwards.

Salary scale: £12,519-£15,744 per annum.

For further information and application form apply to: Assistant Director (Resource), Buckingham College of Higher Education, Queen Alexandra Road, High Wycombe, Bucks HP11 2JZ. Please enclose a.e.e.

**DEPARTMENT OF ENGINEERING**  
**LECTURER II IN ELECTRONICS**

Required as soon as possible to teach Electrical and Electronic Engineering topics across the spectrum of College courses. Degree or equivalent qualification in electrical/electronic engineering required. Must have recent and appropriate industrial experience in electronics industry. Teaching experience desirable but not essential.

Salary scale: Lecturer II £7,215-£11,568 + Local Allowance £246 p.a.

For application form and further details, send S.A.E. to Vice-Principal, Slough College of Higher Education, Wellington Street, Slough SL1 1YG to whom completed forms should be returned within two weeks of the appearance of this advertisement.

**Cambridgeshire College of Arts and Technology**  
**ADVISER FOR STAFF DEVELOPMENT**

Adviser to staff development. The position is full-time and involves teaching and research. The successful candidate will be responsible for the development of the staff development programme. Applications should be sent to the Department of Staff Development, Cambridgeshire College of Arts and Technology.

**University of Oxford**  
**TUTORIAL FELLOWSHIP IN MODERN HISTORY**

The position is full-time and involves teaching and research. The successful candidate will be responsible for the development of the modern history programme. Applications should be sent to the Department of Modern History, University of Oxford.

## Polytechnics continued

**HONG KONG BAPTIST COLLEGE**

Founded in 1955, Hong Kong Baptist College is now a public-funded tertiary institution offering 3-year full-time post-advanced level courses in 18 departments grouped under 4 Faculties, viz. Arts (with Departments of Chinese Language & Literature, English Language & Literature, Music & Fine Arts), Business (Accounting, Business Management, Economics, General Management), Science (Biology, Chemistry, Mathematics, Physics), and Social Science (Communication, Geography, History, Social Work, Sociology).

The College's educational philosophy is that of whole-man education grounded in Christian heritage and accordingly every course is designed to be broad-based with the components of moral studies, liberal education, and complementary studies, and oriented towards a number of career goals. It is intended that graduates from such courses will be well-balanced in academic achievement, professional competence and character development.

The College is developing new courses leading to the award of the Bachelor's degree. Built on the College's liberal education tradition, some of these courses will adopt a course structure of combined studies in a number of disciplines or an interdisciplinary structure. The current student enrolment is 2,100 and the plan is to expand to 3,000 by the end of the decade. A number of new senior posts are created to meet the need of the new development of the College.

Applications are invited for the following senior posts tentatively in March 1984 or as soon thereafter as possible (Post 1) and in July 1984 (Post 2, 3, & 4):

1. **Academic Vice-President**  
To be responsible to the President for (a) maintaining and improving the academic health of the College; (b) ensuring the fulfilment of the College's goal of whole-man education; (c) formulating comprehensive academic development proposals and monitoring the implementation of approved academic plans (including the development of new courses) through direct supervision of the faculty deans; and (d) coordinating academic validation studies by external bodies.

2. **Associate Vice-President (Academic Services)**  
To be responsible to the President for (a) giving guidance and supervision to the management and development of each of the following College-wide academic services units: The Academic Affairs Unit, the Library, the Education Technology Unit, and the Computing Studies Unit; (b) ensuring that the academic services provided by the units under his direct supervision are adequate and effective for supporting the approved academic developments in the various faculties; (c) keeping under constant review the overall academic procedures concerning academic services and to recommend improvements as and when appropriate; (d) assisting the President in guiding the fulfilment of the College's goal of whole-man education.

3. **Associate Vice-President (Administration)**  
To be responsible to the President and (a) to be the principal officer assisting the President with the preparation of plans to procure resources for the College; (b) to be responsible for the management and development of each of the following units: the Financial & Business Affairs Unit and the Computer Services Center; (c) to ensure that the services provided by the units under his direct supervision are adequate and effective for supporting the approved academic developments in the various faculties; (d) keeping under constant review the overall administrative procedures concerning administrative services and to recommend improvements as and when appropriate; (e) assisting the President in guiding the fulfilment of the College's goal of whole-man education.

4. **Faculty Deans**  
Four vacancies of full-time faculty deanship, corresponding to the Faculties of Arts, Business, Science and Social Science, will be filled by appointment to the posts of Dean.

A faculty dean is responsible to the Academic Vice-President for (a) coordinating the operation of the departments within his faculty, including the implementation of their academic plans, the setting and monitoring of academic standards, and the enforcement of academic regulations; (b) reviewing the faculty's development plan in areas including curriculum, student numbers, admissions matters, and resource needs; (c) providing leadership to the development of new courses to meet the needs of the faculty and the College; (d) promoting research, consultancy and other scholarly activities within the faculty; and (e) ensuring that the faculty's academic and administrative services are of high quality.

**HUDDESFIELD POLYTECHNIC**  
DEPARTMENT OF COMPUTER STUDIES AND MATHEMATICS  
**HEAD OF DEPARTMENT** Grade VI (Ref: ACA 4708)

The Department of Computer Studies and Mathematics is responsible for a Computer Studies and Mathematics Course in Computing in Business (MSc/TECH/40) Courses in various courses in the Polytechnic. Candidates for the post of Head of Department should possess managerial and course leadership experience. A sound knowledge of systems analysis, program languages and methodologies, and operating systems concepts is essential. They should also be able to demonstrate a sound understanding of the current development of computing and related technology. A background of successful research, preferably in the application of computers to business and the ability to initiate and develop research within the Polytechnic is also desirable. The successful candidate will be expected to develop postgraduate courses in computer studies.

Salary: Grade VI: £16,832-£18,527.

**CHEMICAL AND PHYSICAL SCIENCES**  
**HEAD OF DEPARTMENT** Grade VI (Ref: ACA 492)

Applications are invited for the above post, which will become vacant on the 1st January 1985, when the present head retires. The successful candidate must be an active research worker possessing an acceptable research record, experienced in supervising the research work of others, and be willing to support existing research programmes in the Department. He/she must also possess the necessary qualities to be a good manager.

Salary: Grade VI: £16,832-£18,527.

The Polytechnic will seek to appoint persons to the above 2 posts who could be seen as candidates for the life of Professorship to be decided in the future. The successful candidate will be expected to develop postgraduate courses in computer studies.

**DEPARTMENT OF ECONOMIC AND MARKETING STUDIES**  
**LII/SL IN BUSINESS STUDIES** (Ref: ACA 493)

Applications are invited for this post which involves teaching business studies subjects and also research in the industrial training scheme in computer studies.

The successful candidate will have a relevant degree, be able to offer teaching in the areas of marketing and organisation studies, and industrial experience would be an advantage.

**DEPARTMENT OF COMPUTER STUDIES AND MATHEMATICS**  
**LII/SL IN STATISTICS** (Ref: ACA 494)

Full-time full-time contract for 2 years from 1st April, 1984 as soon as possible thereafter.

Applicants should possess a good honours degree in a relevant discipline and should also possess a sound knowledge of statistics and higher education. The person appointed may be required to teach on a range of degree and diploma courses across all faculties at the Polytechnic.

Salary: £17,315-£21,555 (Bar) - £19,443.

Applications forms and further particulars can be obtained from The Personnel Office, The Polytechnic, Queensgate, Huddersfield, Tel: 0484 22228, Ext. 2224, and should be returned to that office on or before 18th December, 1983.

**DUNDEE COLLEGE OF TECHNOLOGY**  
DEPARTMENT OF ELECTRICAL & ELECTRONIC ENGINEERING  
**SENIOR LECTURESHIP**

Applicants should possess a good honours degree in electrical and/or electronic engineering or a related discipline, and preferably a higher degree, together with appropriate industrial and/or research experience. The person appointed will be required to teach on a variety of courses up to honours degree level and the person appointed to the senior lecturer post will, in addition, be required to undertake responsibility for subject development and the initiation of research, and also to develop links with industry.

Salary scales: Senior Lectureship £12,228-£13,572 (bar) - £16,411. Lectureship £9,313-£12,228 (bar) - £13,125. With initial placing depending upon approved previous experience. The final placing towards the cost of removal expenses may be payable.

Further particulars and application forms obtainable from the Personnel Office, Dundee College of Technology, Bell Street, Dundee DD1 1HG to whom completed forms should be returned by 31st December, 1983.

**Thames Polytechnic**  
School of Mechanical Engineering  
**RESEARCH ASSISTANT**

Applicants should have a good honours degree in a relevant discipline, and preferably a higher degree, together with appropriate industrial and/or research experience. The person appointed will be required to assist in the development of research projects in the field of mechanical engineering.

**BRIGHTON POLYTECHNIC**  
**Writers/Engineers**  
**OUTTEK Consortium**  
(an Open Tech Project)

An innovative project to make 80 training packages for updating technicians in industry is forming teams to prepare printed and AV materials and to develop training or full-time contact staff. The topics covered are the industrial application of:

Microprocessor Architecture and Operation; Computer-Aided Engineering: CAD/CAM, Robotics and FMS; Microprocessors in Data Communications and Telemetry; Pneumatics and Hydraulics; Physics and newer materials.

**TECHNICAL WRITERS**  
With expertise in one of the topics above, able to write in simple style to final copy. Knowledge of industrial applications and ability to visualise for a high proportion of diagrams, photographs and illustrations.

**ENGINEERS & TECHNICAL SPECIALISTS**  
Graduates in topics above or industrial specialists to provide content, first drafts, or practical worksheets.

Terms of employment to suit individuals, from full-time contracts (in first instance to December 1985) to part-time and freelance. Attractive benefits for the right people.

Write immediately, with full CV and samples to: Clive Hewitt, Southtek Unit, 'A' Block, Brighton Polytechnic, Moulsecoomb, Brighton, BN2 4QJ, giving telephone number, present remuneration and two referees. (16358)

**POLYTECHNIC OF THE SOUTH BANK**  
Borough Road, London SE1 0AA  
**NATIONAL BAKERY SCHOOL**  
**LECTURER, Grade II**  
(Ref: F12)

The National Bakery School invites applications for the post of Lecturer Grade II to teach baking craft and technology.

Applicants should possess a National Diploma in Baking or a Full Technological Certificate in Breadingmaking and Flour confectionery plus appropriate industrial experience.

Salary will be in the range: £B,202 (x 10)-£12,555 per annum inclusive of London Allowance.

Starting salary will depend on qualifications and experience. Application form and further particulars are available from the Staffing Office, Tel: 01-928 8989, Ext. 2365.

Closing date for receipt of completed application forms will be 23rd December, 1983. (16350)

**Oxford Polytechnic**  
Department of Biology  
**LECTURER OR SENIOR LECTURER OR PRINCIPAL LECTURER IN EPIDEMIOLOGY**

A key post has become vacant in a national college of research. This is a full-time position in the Department of Biology. The successful candidate will be responsible for the development of the epidemiology programme. Applications should be sent to the Department of Biology, Oxford Polytechnic.

Salary scales: Lecturer £17,315-£21,555 (Bar) - £19,443. Senior Lecturer £21,555-£25,799 (Bar) - £23,644. Principal Lecturer £25,799-£29,043 (Bar) - £27,422.

Applicants should have a good honours degree in a relevant discipline, and preferably a higher degree, together with appropriate industrial and/or research experience. The person appointed will be required to assist in the development of research projects in the field of epidemiology.

Further particulars and application forms obtainable from the Personnel Office, Oxford Polytechnic, Tel: 01865 27477. Closing date for receipt of completed application forms will be 31st December, 1983.

**Leicester Polytechnic**  
Department of Biology  
**RESEARCH ASSISTANT**

A key post has become vacant in a national college of research. This is a full-time position in the Department of Biology. The successful candidate will be responsible for the development of the research programme. Applications should be sent to the Department of Biology, Leicester Polytechnic.

Salary scales: Research Assistant £11,568-£15,744 (Bar) - £13,125. Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester Polytechnic, Tel: 0533 7777. Closing date for receipt of completed application forms will be 31st December, 1983.

Further particulars and application forms obtainable from the Personnel Office, Leicester



## Colleges of Further Education continued

## SCHOOL OF BUSINESS AND PROFESSIONAL STUDIES

BS/0027  
LECTURER GRADE I IN BUSINESS STUDIES (COMPUTING)

To teach computing, data processing and to contribute to other areas of work including administration in Business, Numeracy and Accounts and the world of work.

BS/0028  
LECTURER GRADE I IN BUSINESS STUDIES (NUMERACY AND ACCOUNTS)

To teach numeracy and accounts, the world of work and general business and technical education of council courses.

BS/0029  
LECTURER GRADE I IN DISTRIBUTION STUDIES

(Fixed term contract to 31st July, 1984)

To teach on the specialist areas of distribution as well as the general areas of BTEC courses.

Applicants for all posts should have relevant commercial/industrial experience; have graduate/professional qualifications and will probably be teacher trained.

Salary: £5,649 to £8,735 pa.

For application forms and further details, please contact: Mr A. W. Hodgson, Staffing Officer, Bradford & Ilkley Community College, Great Horton Road, Bradford, BD7 1AY.

Closing date for receipt of applications: Monday, 12th December, 1983.

Taking up the challenge of tomorrow today!

**Bradford & Ilkley COMMUNITY COLLEGE**

## Southgate Technical College

London Borough of Enfield Education Department

Principal: W.A. O. Easton

MA CSM, M.A. CSM, FRSA

HEAD OF DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING (Grade IV) REF D 1

Following the retirement of the Head of Department of Electrical and Electronic Engineering, applications are invited for the post on from 1 May 1984.

Applicants must have appropriate professional qualifications and teaching experience.

Salary: £6,000 (including £1,000 for pension) plus £1,450 - £18,450.

Consideration will be given to applications with relevant experience, temporary, part-time and two homes allowance.

Application forms and further details (two copies) should be sent to the Principal, Southgate Technical College, High Street, Enfield, London N4 3JL, to whom they should be sent by the closing date of this advertisement.

Inner London Education Authority

London College of Fashion

30, John Princeps St, London, W.1

Applications are invited for the following posts:

LECTURER II - Ladies Hairdressing

To teach on full-time and part-time courses. Applicants should have appropriate qualifications and have relevant experience.

The successful applicant will be responsible for the coordination of the department of hairdressing and will be expected to have a good knowledge of the fashion industry.

Salary in accordance with the London College of Fashion scale, £11,000 - £14,000 per annum.

Further details and application forms may be obtained from the Principal, London College of Fashion, 30, John Princeps St, London, W.1.

Inner London Education Authority

London College of Fashion

30, John Princeps St, London, W.1

Applications are invited for the following posts:

LECTURER II - Ladies Hairdressing

To teach on full-time and part-time courses. Applicants should have appropriate qualifications and have relevant experience.

The successful applicant will be responsible for the coordination of the department of hairdressing and will be expected to have a good knowledge of the fashion industry.

Salary in accordance with the London College of Fashion scale, £11,000 - £14,000 per annum.

Further details and application forms may be obtained from the Principal, London College of Fashion, 30, John Princeps St, London, W.1.

Inner London Education Authority

London College of Fashion

30, John Princeps St, London, W.1

Applications are invited for the following posts:

LECTURER II - Ladies Hairdressing

To teach on full-time and part-time courses. Applicants should have appropriate qualifications and have relevant experience.

The successful applicant will be responsible for the coordination of the department of hairdressing and will be expected to have a good knowledge of the fashion industry.

Salary in accordance with the London College of Fashion scale, £11,000 - £14,000 per annum.

Further details and application forms may be obtained from the Principal, London College of Fashion, 30, John Princeps St, London, W.1.

Inner London Education Authority

London College of Fashion

30, John Princeps St, London, W.1

Applications are invited for the following posts:

LECTURER II - Ladies Hairdressing

To teach on full-time and part-time courses. Applicants should have appropriate qualifications and have relevant experience.

The successful applicant will be responsible for the coordination of the department of hairdressing and will be expected to have a good knowledge of the fashion industry.

Salary in accordance with the London College of Fashion scale, £11,000 - £14,000 per annum.

Further details and application forms may be obtained from the Principal, London College of Fashion, 30, John Princeps St, London, W.1.

Inner London Education Authority

London College of Fashion

30, John Princeps St, London, W.1

Applications are invited for the following posts:

LECTURER II - Ladies Hairdressing

To teach on full-time and part-time courses. Applicants should have appropriate qualifications and have relevant experience.

The successful applicant will be responsible for the coordination of the department of hairdressing and will be expected to have a good knowledge of the fashion industry.

Salary in accordance with the London College of Fashion scale, £11,000 - £14,000 per annum.

Further details and application forms may be obtained from the Principal, London College of Fashion, 30, John Princeps St, London, W.1.

## Research &amp; Studentships continued

## Polytechnic of the South Bank

Borough Road, London, SE1 0AA

Department of Law and Government

RESEARCHER (Ref. RA29)

To research on the role of the state in the development of a national and comparative law. The opportunity to research for a higher degree may be available.

Applicants should have a good first degree in law, education or other relevant subject. They should be able to demonstrate experience or aptitude for independent research.

The appointment will commence as soon as possible.

Salary will be in the range £13,134 to £26,636 per annum inclusive of London Allowance.

Further particulars and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

## Technical Colleges

## Durham County Council

Consett Technical College

HEAD OF DEPARTMENT OF TECHNOLOGY - GRADE III

(£13,089-£14,610)

Applicants are invited from suitably qualified persons for the above post which is available from 1st May, 1984. The post holder will be responsible for the technical education of the college and will be expected to have a good knowledge of the technical education system and to be able to demonstrate experience or aptitude for independent research.

The appointment will commence as soon as possible.

Salary will be in the range £13,089 to £14,610 per annum inclusive of London Allowance.

Further particulars and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.

Completed application forms to be returned to the Staffing Officer, tel. 01-946 8088 ext. 3355.

Further details and application forms may be obtained from the Staffing Officer, tel. 01-946 8088 ext. 3355.